

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TRANSCRIPT OF JURY TRIAL
BEFORE THE HONORABLE RODNEY GILSTRAP
UNITED STATES DISTRICT COURT

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1 P R O C E E D I N G S

2 (Jury out.)

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: Be seated, please.

5 All right. Mr. Fasoli, if you'd like to return to
6 the witness stand, please.

7 And, Mr. Thomas, you may return to the podium.

8 MR. THOMAS: Yes, Your Honor.

9 THE COURT: Mr. Nance, if you'd bring in the jury,
10 please.

11 COURT SECURITY OFFICER: All rise for the jury.

12 (Jury in.)

13 THE COURT: Please be seated.

14 Ladies and gentlemen, we just didn't think this
15 trial was exciting enough for you, so we intentionally
16 planned to turn the power off over the lunch hour.

17 I'm told that everything is back as it should be.
18 So we'll continue with the cross-examination of Mr. Fasoli
19 by the Plaintiff.

20 Mr. Thomas, you may continue.

21 GIANPAOLO FASOLI, DEFENDANT'S WITNESS, PREVIOUSLY SWORN

22 CROSS-EXAMINATION (CONTINUED)

23 BY MR. THOMAS:

24 Q If you need to finish your drink of water, sir, please
25 go ahead.

1 A I'm good. Thank you.

2 Q Mr. Fasoli, just to be clear, you are not trying to say
3 that FairPlay does not enforce content usage rules, right?

4 A No. Apparently, it does. You're right.

5 Q FairPlay enforces content usage rules, and those are
6 the content usage rules for things like how long somebody
7 can play or rent a movie, for example?

8 A Correct. The FairPlay system has usage rules.

9 Q Right. And the FairPlay system enforces -- has
10 software that enforces those usage rules on the customer's
11 device, the iPad or the iPhone, for example, correct?

12 A That is correct.

13 Q And the FairPlay system actually also has usage rights
14 that it enforces as well; isn't that true?

15 A Yes. Usage rules or rights, they're the same in my
16 opinion.

17 Q Okay. So in the vernacular that you, as leader of the
18 FairPlay team, use, you use the term "usage rights" and
19 "usage rules" interchangeably; is that correct?

20 A Yes, that's correct.

21 Q So a usage right in the FairPlay vernacular would
22 include a limitation on how long somebody had to play a
23 rented movie, for example, correct?

24 A Yes, that's correct.

25 Q Or whether that be 24 hours from the time it was first

1 started to being played, that would be one usage right that
2 was enforced by FairPlay, correct?

3 A Yes.

4 Q Or whether it was a 30-day window, that would be
5 another usage right that was enforced by FairPlay, correct?

6 A That is correct.

7 Q And FairPlay also makes sure that the content, the
8 movie, a purchased movie, for example, is never in clear or
9 unencrypted form, at least the entirety of it, when it's on
10 the customer's device, correct?

11 A That is not the primary goal of FairPlay. FairPlay is
12 there to protect the content while resting the transport of
13 the keys and the usage of the keys.

14 Q But one of the things that does happen within the
15 iTunes's DRM system is that on a customer's device, when a
16 customer purchases a movie, that movie is never on that
17 customer's device completely unencrypted, correct?

18 A That is correct.

19 Q And FairPlay makes sure of that because FairPlay, when
20 it goes to decrypt content for playback, is only decrypting
21 a little piece of the content or the movie at a time, right?

22 A That is correct, only the necessary portions.

23 Q Only the necessary portions. So FairPlay is designed
24 such that at no time when FairPlay is decrypting content is
25 the entirety of that content file, the movie, the book, the

1 TV show, ever sitting on the customer's device, the whole
2 thing unencrypted and in the clear.

3 That's what -- that's the way FairPlay was designed, to
4 avoid that, right?

5 A That's correct. FairPlay and the rest of the system,
6 yes.

7 Q Okay. Now, sir, you were asked some questions about
8 Akamai.

9 Do you recall that?

10 A Yes, I do.

11 Q Now, as far as FairPlay is concerned, FairPlay is --
12 has -- from FairPlay -- from FairPlay's point of view,
13 Akamai is not relevant to how Apple's DRM system protects
14 content; isn't that true?

15 A That is correct. We only use it to store the
16 distribution copies of the movies.

17 Q And as a matter of fact, to the entirety of the iTunes
18 DRM system, their enforcement of usage rights has no
19 relationship whatsoever to where the content comes from,
20 right?

21 A As part of the -- I mean, yeah, when you're purchasing
22 the movie, it doesn't matter where it's coming from.

23 Q I'm talking about how FairPlay and iTunes -- now, you
24 do realize, sir, that the accused instrumentalities or the
25 accused systems here are a combination of FairPlay and

1 iTunes software, right?

2 A Yes.

3 Q Okay. Because in your direct examination, I noticed
4 that you talked almost exclusively about what FairPlay was
5 doing, right?

6 A That is my area of expertise, yes.

7 Q Right. And so you're not an expert on how iTunes works
8 on the client device, right? That is, on the customer's
9 iPod or i -- I'm sorry -- iPad or iPhone, are you?

10 A I'm familiar with it. I'm not an expert.

11 Q And you're not here trying to explain to us how the
12 iTunes software on the customer's device works to enforce
13 usage rights, are you?

14 A Well, that enforcement happens in FairPlay, so I can
15 speak to the FairPlay part.

16 Q But the iTunes -- but the accused instrumentality is
17 how iTunes, in combination with FairPlay, allegedly
18 infringes the claims.

19 You're aware of that?

20 A Yes.

21 Q Okay. So there's -- it's not just FairPlay that we're
22 looking at for purposes of infringement; it's FairPlay plus
23 iTunes.

24 You're aware of that, right?

25 A I understand.

1 Q Okay. So, for example, you know that on an iPad, for
2 example, when -- let me back up.

3 You described some tests that you did, and you had a
4 screen up where you said that you -- I think you said you
5 either deleted or wiped the media library.

6 Do you recall that?

7 A Yes, I do.

8 Q Now, that was on a Mac Book machine, right, a desktop
9 or a laptop computer?

10 A That screen was from a -- from a desktop, correct.

11 Q You didn't show us any screens from any iPad or
12 iPhones, did you?

13 A Not on that specific slide.

14 Q You didn't show us any screens where there were any
15 actual displays, any screenshots, anywhere in your direct
16 testimony from an iPad or an iPhone, did you?

17 A Well, there was John's iPad at the bottom of the slide
18 a few times.

19 Q A screenshot, sir. You know what a screenshot is,
20 right?

21 A Yes.

22 Q You know the one where you actually take a picture of
23 something that actually comes up on the screen. You're
24 aware that that's what a screenshot means?

25 A Yes.

1 Q Okay. You didn't show us in your direct examination
2 what's actually being displayed on an iPad when the iPad is
3 processing a request to either consume, that is, get and
4 play, DRM-protected content.

5 You didn't do that, did you?

6 A Correct. That wasn't shown.

7 Q Right. And you didn't do that for any screenshots from
8 an iPhone either, did you?

9 A That is correct. That wasn't shown.

10 Q You focused strictly on the screenshots from the Mac
11 computer, right?

12 A Correct. The iTunes program on the Mac --

13 Q Right.

14 A -- or PC.

15 Q And the -- and the test that you did where you said you
16 deleted the media library, you can't do that test on an
17 iPad, can you, sir?

18 A Well, I, as an Apple engineer, with internal software
19 can.

20 Q But people that are out there -- normal people,
21 consumers, people like me, who own an iPad, I can't do that
22 test, can I?

23 A Well, the context of the question was for quality
24 assurance, and we do those internal tests for quality
25 assurance.

1 Q That's right, sir. But the operating system, the iOS
2 operating system that the iPhone and iPad run on, that is
3 not an open system, is it, sir?

4 A It depends. What do you mean by that?

5 Q Well, you described the Mac and the Windows as being
6 these open systems.

7 A They are very open platforms, yes.

8 Q Right. And the iPad and the iPhone are very closed
9 platforms in comparison; wouldn't you agree?

10 A From a Harvard point of view, certainly.

11 Q Okay. And so a normal person who might be able to do
12 the test you described on a Mac couldn't do that test on an
13 iPad, could they?

14 A Correct. That specific software doesn't exist for
15 users on an iPad.

16 Q And that specific software doesn't exist for users on
17 an iPhone to do the test that you described for us, right?

18 A That is correct. It's not available to users.

19 Q Right. And so users don't have the ability to go into
20 their iPad or an iPhone and erase that media library the way
21 you described that you did for this test with the special
22 software that you have as a quality assurance engineer at
23 Apple, right?

24 A Right. Not directly from their iPad, no. They could
25 do it differently, if they wanted to, from a desktop.

1 Q Right. But I'm talking about just working your iPad,
2 sir. If I -- if you only owned an iPad or an iPhone, you
3 couldn't do the test that you're talking about, right?

4 A Correct. If you only have those devices, you would not
5 be able to.

6 Q Okay. Now, sir, you're aware that we're asking for
7 damages in this case -- money damages from Apple for what we
8 say are the infringing activities.

9 You're aware of that, right?

10 A Yes, I am.

11 Q And do you know what the split is between how much
12 we're asking for in damages for sales of iPhones and iPads
13 versus sales of Macintosh computers, the ones that you
14 described these tests being performed on? Do you know what
15 that split is?

16 A I'm not aware, no.

17 Q Would it surprise you, sir, if it's about one-tenth of
18 the damages we're asking for -- for devices is for Mac --
19 Macintosh and desktop computers and 90 percent of it's for
20 iPods and iPads? Would that surprise you?

21 A I'm not a damages expert. I don't know how those
22 calculations are made.

23 Q So when you put together the slides that you showed us
24 today, that was your work, right?

25 A Yes, partly.

1 Q Didn't you want to focus, at least sometimes, on how
2 the system works on the products that are 90 percent of the
3 alleged infringing devices in this case?

4 A That is what we showed with the purchases and the
5 rentals. Those were all to an iPad device.

6 Q I asked about the screenshot, sir. Perhaps you didn't
7 hear me question. Did you hear me ask about a screenshot?

8 A I -- no, I forgot that part.

9 THE COURT: All right. First of all, let's slow
10 down.

11 Second of all, Mr. Thomas, if you don't believe
12 the witness is responsive, you raise it with the Court.
13 Don't ask him, did he understand your question.

14 MR. THOMAS: Yes, Your Honor.

15 THE COURT: All right. Let's continue.

16 Q (By Mr. Thomas) You didn't show any screenshots for the
17 iPad and iPhone in your presentation today, did you, sir?

18 A No, I didn't.

19 Q Even though the iPads and the iPhones make up
20 90 percent of the alleged damages that we're looking for in
21 this case, right?

22 A We didn't show any screenshots from the phone or the
23 Pad.

24 Q That's because you couldn't do the same tests that you
25 described on the Mac on the iPhones and the iPads? We

1 established that, right?

2 A Well, again, I personally can because I'm internal to
3 Apple, and I have internal software.

4 Q But normal people out there don't have access to that
5 special software that you have as an internal Apple
6 engineer, right?

7 A That is correct. Users do not.

8 Q So, as a matter of fact, that test that you were
9 describing, you're not aware of any normal consumer who's
10 ever performed that test on their device, right? Unless
11 they had access to this special software or they were a
12 special engineer at Apple?

13 A That isn't correct. The test I described is on the
14 desktop.

15 Q Okay. Now, sir, it's not on the iPhone -- iPhone or
16 the iPad, though, is it?

17 A That is correct.

18 Q You didn't mention that during your direct examination,
19 though, did you?

20 You didn't mention that the test you were showing us
21 that you thought was relevant in this case can't be
22 performed on 90 percent of the accused infringing products.

23 You didn't mention that, did you?

24 A In the context of the slide, I was talking about
25 desktops, and that is one of the tests that we performed.

1 Q But you didn't perform any tests of the same type on 90
2 percent of the products that are accused of infringement in
3 this case, right, the iPhone and the iPads?

4 A No. I actually did perform those tests because I have
5 access to internal software for the iPhone and the iPad that
6 can do that.

7 Q I understand, sir. But you didn't show where anybody
8 could do the things you said could be done on a Mac on an
9 iPad or an iPhone, right?

10 A That is correct. That was not shown.

11 Q And just to be clear, the content -- and I think you
12 were, but the content that's coming from Akamai, it has --
13 where it comes from has no relation to how the iPad or the
14 iPhone enforces usage rights on the device, correct?

15 A That is correct. It's independent.

16 Q And the content on Akamai is always encrypted, right?

17 A Yes. The content we sell, yes.

18 Q And I believe we heard earlier testimony in this case
19 that Apple has about 1.5 petabytes, I think was the -- was
20 the name for the amount of information that it stores for
21 its DRM-protected content.

22 Does that sound about right?

23 A That sounds right. Again, I'm not the expert in that
24 area, but that sounds about right.

25 Q And that's stored on computers that Apple owns and

1 controls at Apple's headquarters, right?

2 A Well, certainly not the distribution copies.

3 Q The originals are stored there, right, sir?

4 A Yes, that's correct.

5 Q Okay. And even the distribution copies, there's never
6 a time where the entirety of that library, that whole
7 1.5 petabytes of movies, books, and TV shows that Apple has
8 from content owners, is ever sitting on an Akamai server?
9 There's never a time when all of it is out there, is it?

10 A I -- I mean, I wouldn't know. I'm the FairPlay expert,
11 not the content distribution expert. But I'm pretty sure we
12 don't have backup copies on Akamai, if that's your question.

13 Q No, sir. I'm just asking you about whether you know
14 anything about the capacity of Akamai. Because you made it
15 sound like all of the content that Apple has is sitting out
16 there cached on these servers at Akamai waiting for an Apple
17 customer to acquire it.

18 But that's not the case, is it, sir?

19 A No. Only the content we distribute is on Akamai, and
20 only the most commonly purchased pieces of content are in
21 the cache.

22 Q Right. And those are just some small portion of the
23 overall percentage of the content, right, sir?

24 A The ones that are in the cache are a small percentage,
25 yes.

1 MR. THOMAS: Now, could I please have up Slide 6.9
2 of your presentation?

3 Q (By Mr. Thomas) Now, you see here, sir, where this
4 was -- where you were describing the purchase response to
5 us. And I notice that you have down here in blue type what
6 we call the URL. That's what you called it, right?

7 A Yes.

8 Q And you've got the title there, the movie, Captain
9 America, at the end, and then you've just got a dot, dot,
10 dot in between there?

11 A Yes.

12 Q Do you see that? Do you know what's in that dot, dot,
13 dot, sir?

14 A Yes. Well, that's for illustration purposes. There
15 has to be a host name there and then eventually also a path
16 to a file.

17 Q That host name doesn't say Akamai, does it, sir?

18 A No.

19 Q It says Apple, doesn't it?

20 A It ends in Apple.com.

21 Q Right. It doesn't have Akamai anywhere in that URL
22 address name, does it, sir?

23 A Not that I know of.

24 Q But all of them -- all of those URLs that are already
25 sent with a purchase response, they all end in Apple.com,

1 right?

2 A That is correct.

3 Q You didn't mention that during your direct examination.
4 Was there a reason that you left off the information that's
5 highlighted here on the slide?

6 A We actually mentioned it during the direct, and I also
7 explained how the user's iPad uses that information to
8 resolve it to an IP address that's owned and operated by
9 Akamai.

10 Q You mentioned during your direct examination, sir, that
11 the word "Akamai" never comes up in that URL?

12 A Yes. I believe I specified that it ends in Apple.com.

13 Q You think you said that?

14 A I'm pretty sure I did.

15 Q Okay. Now, FairPlay, the DRM FairPlay, it does check
16 to see whether or not it has the proper keys before the
17 usage rights that it enforces can be applied, correct?

18 A It depends if it's a purchase or a rental.

19 Q Right. If it's a purchase, it's looking for the proper
20 account key, right?

21 A It looks for the key, yes.

22 Q I'm sorry?

23 A Yes, that -- and that is it.

24 Q And if it's a rental, it's looking for the appropriate
25 rental key in the Rentalbag, right?

1 A Right. It looks for the key.

2 Q Okay. And if it doesn't have the proper keys for a
3 particular piece of content, a particular movie, a
4 particular TV show, a particular book, then it cannot
5 enforce the usage rights that apply to that piece of
6 content, can it?

7 A If the key can't be found, then it can't decrypt the
8 content so the content can't play.

9 Q And I believe that you told me earlier that FairPlay
10 enforces usage rights on content, right?

11 A Correct.

12 Q And the only way it can enforce usage rights on content
13 is if it has the appropriate decryption keys, right?

14 A That's correct. And -- and they have to be valid in
15 the rental case, too.

16 Q And if it can't find those keys, then the usage rights
17 cannot be enforced, right?

18 A Yeah. If the key's not present, the movie can't be
19 played, and that's how we enforce the usage right, yes.

20 Q And in that Rentalbag that comes down with the rental
21 key, there are timers, are there not?

22 A So it's a Rentalbag response that comes from the
23 server, and we merge that into the local Rentalbag, and,
24 yes, associated to the rental key, there's validity periods.

25 Q And so that would be like the 30-day period to watch a

1 movie that you rented, correct?

2 A That is correct.

3 Q Or the 24-hour period to finish watching it once you
4 started, correct?

5 A That is correct.

6 Q Now, if those timers, if that information was not in
7 the Rentalbag, FairPlay could not enforce the usage rights
8 on the device, could it?

9 A That is correct.

10 Q And you also had some descriptions about media kinds.
11 Do you remember that, sir, during your direct testimony?

12 A Yes.

13 Q And FairPlay uses media kinds to differentiate between
14 a song and a book, correct?

15 A Yes.

16 Q And it uses the media kinds to differentiate between a
17 movie and a TV show or a song or a book, right?

18 A Well, so FairPlay has that information, but the ones we
19 talked about in the direct were the ones that are used in
20 iTunes for the categorization.

21 MR. THOMAS: May I please have --

22 Q (By Mr. Thomas) Mr. Fasoli, you remember giving
23 deposition testimony in this case, right?

24 A Yes, I do.

25 Q And you remember I was the one asking you questions

1 there, right?

2 A Yes, I do.

3 Q You tried to give me the fullest, best, most honest
4 answer you could -- you had at that time when I asked you
5 that question, right?

6 A Yes, I did.

7 MR. THOMAS: Could I please have Page 137,
8 Line 20, to Page 138, Line 14, from Mr. Fasoli's deposition?

9 Q (By Mr. Thomas) Now, sir, did you provide this answer
10 to the question: What's the difference between a media type
11 and a media kind if -- if to your way of thinking, if there
12 is one?

13 That was the question I asked you, right? Are you
14 reading that?

15 A Yes, I did, in the context of the FairPlay media kinds.

16 Q And then you say: So the media kind in the FairPlay
17 context is very specific. We actually have an enumeration
18 in the FairPlay source code that enumerates the different
19 media kinds that are associated to FairPlay content.

20 And what we use for that mainly is to be able to
21 distinguish across different types of media kinds that may
22 look alike. Typically, we use that to differentiate a song
23 from an audiobook because both only have one audio track.
24 The best way we have to differentiate the two is by using
25 the media kind. It differentiates audiobooks from songs.

1 Then you say: We also use it to string or not to
2 string together but to give some -- again, be able to
3 differentiate between a TV show and a movie in the realm of
4 video files.

5 That's what you testified to at your deposition, right,
6 sir?

7 A Correct, again, in the context of the FairPlay media
8 kind.

9 Q Now, sir --

10 MR. THOMAS: Can I please have Slide 6.23 up,
11 please?

12 Q (By Mr. Thomas) Now, sir, you recall talking about how
13 you, as head of the FairPlay team, the Fasoli team on this
14 diagram or on this picture, forwards the updated FairPlay
15 software to Mr. Ward and his team?

16 Do you recall that?

17 A Yes, I do.

18 Q Now -- and you said you put it in an evidence bag,
19 correct?

20 A Yes.

21 Q I think you identified one. Your lawyer held it up,
22 right?

23 A Yes.

24 Q And that you walk it, hand-carry it over to Mr. Ward so
25 that he can put it on all the FairPlay servers, right?

1 A Well, he doesn't -- it's the server team that does
2 that.

3 Q But you walk it across to Mr. Ward because Mr. Ward has
4 access to the FairPlay servers, right? You got to get it to
5 him.

6 A Yes. He's the step before the team that has access to
7 the servers, and it's him or someone on his team.

8 Q Oh, so is Mr. Ward not the one that's actually
9 installing the software on the FairPlay servers?

10 A No. It's the server team.

11 Q I see.

12 And this server team, I notice that you don't have any
13 description on here. That's that last arrow all the way to
14 the right, correct?

15 A Correct.

16 Q You don't have any description over here about how that
17 software is installed on the Apple DRM servers by the server
18 team, do you?

19 A That's correct. There's no description.

20 Q And you didn't point out to us any source code that
21 controls the installation of that updated FairPlay software
22 by the server team on to the Apple DRM servers, did you?

23 A No, we didn't.

24 Q And when I say an "Apple DRM server," in your
25 vernacular, a DRM server is the same thing as a FairPlay

1 server, right?

2 A Yes.

3 Q You -- you guys at Apple, at least on the FairPlay
4 team, you use those two terms interchangeably, "DRM servers"
5 and "FairPlay servers," right?

6 A That's correct.

7 Q Okay. Because you weren't trying to suggest that
8 there's only one place that the evidence bag has to get to
9 in order for the software to be updated, right?

10 A The evidence bag goes from someone on my team to
11 someone on Mr. Ward's team.

12 Q And you think the evidence bag is part of the
13 installation process, loading the software on to those Apple
14 servers? Do you think that?

15 A It's the beginning of the process to update the
16 software.

17 Q I said, sir, do you think that's part of the
18 installation? Installing the software on the Apple servers,
19 that's what the server team does, isn't it, sir?

20 A That's what the server team does, and that is -- that
21 transfer of the bag is not part of the installation, you're
22 right.

23 Q Right. So the installation of the software on the
24 FairPlay DRM servers doesn't have anything to do with that
25 evidence bag, does it?

1 A Well, without my team producing the software, there's
2 no software installed.

3 Q Well, that's true for any software, isn't it, sir?
4 Before it gets installed, it's got to be written somewhere,
5 right?

6 A Correct.

7 Q Okay. So, therefore, what's happening is the
8 installation of the software on the DRM servers is done by
9 the server team over here on the right, not by the bag over
10 here on the left, is it?

11 A They're the final step, yes.

12 Q Okay. And it's there that digital certificates would
13 be needed, correct, sir?

14 A I don't see why, no.

15 Q Do you know, sir, what kinds of servers are -- or what
16 kinds of computers the Apple DRM servers are -- actually are
17 over there in the installations where they're running?

18 A As far as I know, they're Lenox servers.

19 Q Do you think, sir, they ever used to be Mac servers,
20 Mac OS X or OS 10 servers?

21 A They used to be a long time ago, yes.

22 Q And actually, they were, at least up until 2012, right?

23 A Well, that's for the import part, not for the finance
24 part, yes, but you're right. They were up until probably
25 2012.

1 Q Yeah. And do you know, sir, that OS X, at least the
2 version that was running on those Apple servers -- and I
3 want to say OS X. I mean Roman numeral X, sometimes it's
4 called OS 10, I believe; is that correct?

5 A Yes.

6 Q Okay. But you know what I'm talking about when I talk
7 about that, right? I'm talking about the server software
8 that is operating the Apple DRM servers, right?

9 A Yes, the operating system.

10 Q And they have firewalls in them, don't they, sir?

11 A They do. I don't know if they're active.

12 Q And the firewalls require the presentation of a digital
13 certificate along with any application or software that's
14 going to be presented, don't they?

15 A I don't think that's the case.

16 MR. THOMAS: If I, Mr. Diaz, may have the Apple
17 document with the last four Bates Nos. 3627. It's
18 Plaintiff's Exhibit 1027.

19 Q (By Mr. Thomas) Do you recognize this document, sir?

20 MR. THOMAS: If we could go back to the cover
21 pages.

22 Q (By Mr. Thomas) You see there, it says "FairPlay
23 servers." It's got an Apple Bates number on the bottom.

24 A I've never seen this document.

25 Q Up at the top, it says: FairPlay servers, DRM servers.

1 On the first line, it says: Equal FairPlay servers.

2 And see, it says: Sometimes we use one; sometimes we
3 use the other.

4 They are synonyms just like you just told me, right?

5 A I see that line.

6 Q And that's what you just told me a moment ago, right?

7 A Yes.

8 MR. THOMAS: And if you could, go to the next
9 page.

10 Q (By Mr. Thomas) And in the internals down at the
11 bottom, you see where it says: Every DRM server -- that's a
12 FairPlay server, right, sir?

13 A Yes.

14 Q -- runs OS X Leopard and Apache?

15 Do you see that, sir?

16 A Yes, I do.

17 Q And do you know, sir, that OS X Leopard requires
18 digital certificates for software to be installed on that
19 server?

20 A I believe that depends on the configuration of that
21 machine.

22 Q That depends on the configuration of that machine, sir?
23 Did you look to see what the configuration of that machine
24 was before you came here to testify?

25 A No, I didn't.

1 Q So as far as you know, that machine was configured such
2 that it required digital certificates before those DRM
3 server updates could be installed on that computer, right?

4 A No, I believe that's incorrect.

5 Q You said you didn't know, sir. You didn't look. You
6 said it could be configured, such that it has to have
7 digital certificates before the software can be loaded on to
8 that operating system, right?

9 A But I do know that the serve -- that the software that
10 I provide does not end up having any digital certificates.

11 Q Software you provide ends when you put it in the
12 evidence bag, right, sir?

13 A That is correct.

14 Q And you said you didn't know who the server team was
15 and what the server team was doing. That last hop on that
16 last -- I think it was whatever your last --

17 MR. THOMAS: If we could go back, Mr. Diaz, to the
18 slide that was used in Mr. Fasoli's deposition. I think
19 it's 6 -- yeah, here we go.

20 Q (By Mr. Thomas) The server team, sir -- you don't know
21 what the server team is doing before it installs those
22 server updates on the FairPlay servers, do you?

23 A Well, I know who they are, and I know what they do.

24 Q You don't know whether -- you didn't describe for us --
25 you just told me a moment ago, sir, that you didn't have a

1 description of what the installation process was on that
2 last hop.

3 A I said I believe we did not publish the source code for
4 that, but I do know what they do.

5 Q Right. You didn't publish the source code because you
6 didn't bring it here, right, sir?

7 A That is correct.

8 Q And you didn't see it in any of the source code you
9 reviewed? Remember you said you reviewed a bunch of the
10 source code that was produced to us, ContentGuard. Do you
11 recall telling us that?

12 A I do remember.

13 Q And you said you reviewed the relevant source code,
14 right?

15 A Yes.

16 Q But you didn't review the source code that is used in
17 this last step to get -- when the software is actually
18 installed by the server team into the FairPlay servers. You
19 didn't look at that source code, did you, sir?

20 A No, because it's a very basic set of commands.

21 Q You didn't look at that source code, did you, sir?

22 A I did not.

23 Q And you didn't bring it here to this courtroom to show
24 it to us, did you, sir?

25 A That is correct. I did not.

1 Q And you don't know whether it was ever produced to us
2 for our source code experts to review, do you, sir?

3 MR. PRITIKIN: Your Honor, objection. There's a
4 MIL on this subject.

5 THE COURT: Sustained. Strike that last question.

6 Q (By Mr. Thomas) And it certainly wasn't in any of the
7 relevant source code that you reviewed that you testified
8 about earlier today, was it, sir?

9 A Not of the code that I looked at.

10 MR. THOMAS: Now, if we could have that slide back
11 up, please, Mr. Diaz.

12 Q (By Mr. Thomas) You see you've got Mr. Ward here, and
13 you did create this slide, I believe; correct?

14 A I worked on it, yes.

15 Q And you've got down here -- you say that there's a
16 secure socket layer transmission, an SSL transmission from
17 Mr. Ward's team over to the server team.

18 Do you see that?

19 A I do.

20 Q But then you say it's a hand delivery or shared
21 directory.

22 You see that?

23 A That is correct. Either one of those three can happen.

24 Q Now, you know Mr. Ward was deposed in this case because
25 you met with him to prepare -- when you met with all the

1 other Apple witnesses when you were preparing for your
2 deposition testimony, you were in the same room reading the
3 same patents, meeting with the same lawyers, right?

4 A I do remember.

5 Q Okay. And Mr. Ward was asked in his deposition: How
6 does his team transfer the source code for the FairPlay
7 servers over to the server team?

8 Have you looked at that testimony that he gave in
9 that -- in that deposition, sir?

10 A Yes.

11 Q Okay.

12 MR. THOMAS: And if I could please have up
13 Mr. Ward's testimony, Mr. Diaz. It's at Page 69, Lines 4 to
14 15.

15 Q (By Mr. Thomas) And you see here, sir, where Mr. Ward
16 was asked: How are the system administrators provided with
17 the updates for the FairPlay servers?

18 Answer: The modules are transferred to them using the
19 messages application.

20 What is the messages application?

21 It's an application that runs on Macs and was, I
22 believe, formerly called iChat.

23 Are the updates -- are the modules transferred to them
24 over a secure channel?

25 And then there was an objection.

1 And Mr. Ward said: They are transferred over a jabber
2 connection, yes, so I believe it uses SSL.

3 He didn't say anything there about hand delivery, did
4 he?

5 A No, he didn't.

6 Q He didn't say anything there about --

7 MR. THOMAS: May I have the slide back that
8 Mr. Fasoli was using on his direct testimony?

9 Q (By Mr. Thomas) He didn't say anything about a shared
10 directory, did he?

11 A No, he didn't.

12 Q You know Mr. Ward to be an honest person, don't you?

13 A Yes, I do.

14 Q And you think he was going to tell the truth to the
15 questions that were asked of him in his deposition?

16 A Yes. I believe he was just talking about one instance,
17 and they do it one way or the other, depending on who on his
18 team is doing it.

19 Q Well, that's -- that's a nice revisionist history, sir,
20 but what do you think he actually said? We just --

21 THE COURT: Mr. Thomas -- Mr. Thomas, "that's a
22 nice revisionist history" is the kind of sidebar comment
23 that you know is not permitted.

24 MR. THOMAS: Yes, Your Honor.

25 Q (By Mr. Thomas) Mr. Ward never mentioned hand delivery

1 or shared directory --

2 THE COURT: Mr. Thomas?

3 MR. THOMAS: Yes, sir.

4 THE COURT: I hadn't told you to proceed.

5 MR. THOMAS: Oh, I apologize, Your Honor.

6 THE COURT: I don't expect there to be similar
7 sidebar comments from you in this trial. Do you understand
8 me?

9 MR. THOMAS: Yes, Your Honor.

10 THE COURT: Now, ask your next question.

11 MR. THOMAS: Yes, Your Honor.

12 Q (By Mr. Thomas) Mr. Ward never said hand delivery or
13 shared directory. When he was asked that question and he
14 was answering it under oath where he had sworn to tell the
15 truth and the whole truth, he didn't say hand delivery or
16 shared directory, did he?

17 A That is correct.

18 Q And do you know, sir, that in the messages app, which
19 was formerly called iChat, that runs on these Mac OS X or
20 OS 10 servers?

21 Are you aware of that?

22 A It runs on a Mac laptop or desktop, and there's a
23 server component to it.

24 Q And there's a server-to-server communication that could
25 happen there, too, right, using iChat and Mac?

1 A That's possible, I believe.

2 Q And you know, sir, that in the iChat server system
3 administration manual, it says: When two servers talk to
4 each other through iChat, both of them have to have digital
5 certificates if it's an encrypted communication.

6 Are you aware of that?

7 A I was not aware of that. I never looked into that, no.

8 Q Okay.

9 MR. THOMAS: If I could approach the witness, Your
10 Honor, I have a -- an exhibit I'd like to hand to him.

11 THE COURT: You may approach.

12 THE WITNESS: Thank you.

13 Q (By Mr. Thomas) Do you recognize that document, sir?

14 A I've seen it a very long time ago.

15 Q And if you could, please turn to Page 11.

16 THE COURT: Counsel, is there an exhibit number on
17 this?

18 MR. THOMAS: No, Your Honor. It's not. This is
19 something I'm just using as a demonstrative for purposes of
20 cross-examination.

21 THE COURT: All right. Well, you called it an
22 exhibit, so I was looking for the number.

23 MR. THOMAS: My mistake, Your Honor.

24 THE COURT: Let's proceed.

25 Q (By Mr. Thomas) In this document, sir --

1 MR. PRITIKIN: Your Honor, it's not marked as a
2 trial exhibit. I mean, I -- I haven't looked at it. It's
3 just been handed to me now.

4 THE COURT: No. I think we've established it's
5 not a pre-admitted exhibit.

6 Now, if Counsel chooses to use it as a
7 demonstrative, I think he's permitted to do that unless it
8 violates one of my limine orders or otherwise subject to an
9 objection that you might raise, but until -- until that
10 time, I think, as long as it's an aid to the witness as a
11 demonstrative, he's entitled to use it.

12 MR. PRITIKIN: Okay.

13 THE COURT: But if you find it objectionable for
14 some substantive reason, you're free to raise that objection
15 with the Court.

16 MR. PRITIKIN: Thank you, Your Honor. I'll take a
17 look at it.

18 Q (By Mr. Thomas) Now, sir, if you could, looking at
19 Page 11 in the -- one, two, three, four, five, six --
20 seventh paragraph down, the one that says the iChat server.

21 Do you see that?

22 A I do.

23 Q And it says: The iChat server can be configured to
24 require S2S -- that's server-to-server sessions -- be
25 encrypted and to block S2S sessions with servers that do not

1 support encryption.

2 Do you see that?

3 A Yes, I do.

4 Q And then it says: For encrypted sessions to be
5 established, both servers must possess public key
6 certificates either self-signed or issued by a recognized
7 certificate authority.

8 Does that refresh your recollection, sir, as to whether
9 or not server-to-server communications using iChat require
10 certificates on both ends?

11 A It says here that the server can be configured to
12 require, and I don't know if we use this software to operate
13 our iChat servers. I do not know.

14 Q That's because you didn't find the iChat source code in
15 the source code that you reviewed that was produced in this
16 case, correct?

17 A Well, this is a very old operating system, and it's the
18 server version, so, no, I've never looked at the source code
19 for this operating system.

20 Q But it does say that the source code for this operating
21 system, because this operating system was certainly in
22 effect during at least some portion of the time, where you
23 said that there were never any digital certificates used in
24 the installation of FairPlay updates, right?

25 A This server has nothing to do with the FairPlay server

1 updates at all.

2 Q Servers and iChat server, correct, sir?

3 A As in iChat server because that's what we're talking
4 about here, yeah.

5 Q And that's what Mr. Ward described the messages
6 application as he says a predecessor to iChat. That's what
7 he said in his testimony, right?

8 A That is what he said, but it doesn't mention the use of
9 the Mac OS 10 server.

10 Q And he says it uses SSL -- Mr. Ward did -- which is
11 Secure Socket Layer, correct?

12 A That is correct.

13 Q And Secure Socket Layer communications are encrypted,
14 correct, sir?

15 A They can be.

16 Q And if they're encrypted and if this -- if the source
17 code that was being used to move that information from
18 Mr. Ward's team to the server team were using this Mac,
19 which is an Apple OS X server operating system, if it was
20 using that and it was encrypted, both ends of that
21 transmission would have to have a certificate, right?

22 A They would, but I don't know if it was using this
23 server.

24 Q And you didn't check to see whether or not, at any time
25 in the past, there was ever certificates that were used in

1 the transmission from Mr. Ward's team to the server team,
2 did you, sir?

3 A I never checked, but it's just the transmission. The
4 software that comes into the SSL tunnel comes out on the
5 other end unaltered.

6 Q And so the software that went in from Mr. Ward's team
7 on the SSL tunnel going to the server team, there has to be
8 a certificate exchanged in order to encrypt that tunnel,
9 correct?

10 A That is usually the way it works, yes.

11 Q And so the software could not have been moved from
12 Mr. Ward's team to the server team over an SSL connection
13 without there first being a presentation of a certificate to
14 establish that encrypted communication channel, right, sir?

15 A I believe that encryption on the tunnel is an option.

16 Q The messages app, you believe that a Secure Socket
17 Layer communication channel has optional encryption and is
18 not an encrypted tunnel? Is that what you just said?

19 A I'm saying, yeah, it's possible to configure SSL to
20 only sign and not encrypt.

21 Q Fair enough.

22 In order to establish an SSL connection, there has to
23 be a presentation of the digital certificate at the least,
24 correct?

25 A Yes. Usually, yes.

1 Q And for Mr. Ward to move that software from his team to
2 the server team over an SSL connection, he had to first at
3 least present a digital certificate in order to establish
4 that SSL connection, right?

5 A His software would have done that; he wouldn't have,
6 yes.

7 Q And that would have had to happen before the software
8 could be moved from Mr. Ward's team to the server team,
9 correct?

10 A Typically, yes.

11 Q Now, sir, the iOS operating system that runs on the
12 iPhones and the iPads, that's a -- that's a highly secure
13 operating system, isn't it?

14 A We try to make it secure, yes.

15 MR. THOMAS: If I could have Plaintiff's
16 Exhibit 1043 up, please, Mr. Diaz.

17 Q (By Mr. Thomas) Do you recognize this, sir, as an iOS
18 security white paper published by Apple on or around
19 February of 2014?

20 A I do.

21 Do you have a hard copy?

22 Q I do, actually.

23 Oh, I'm sorry. I apologize. I don't. I thought I
24 did. But I was going to just draw your attention to a
25 couple of the pages in here.

1 MR. THOMAS: If you could -- if I could go to
2 Page 3.

3 Q (By Mr. Thomas) And you see there, sir, on the left,
4 there's a diagram, and it talks about the security
5 architecture of iPhones and iPads?

6 A I see the diagram.

7 MR. THOMAS: May I approach the witness, Your
8 Honor?

9 THE COURT: You may.

10 Q (By Mr. Thomas) And that security architecture diagram
11 on Page 3 shows that there's an Apple root certificate all
12 the way at the bottom and all of those iPhones and iPads.

13 Do you see that?

14 A I see that.

15 Q And so every one of these devices, an iPhone or an
16 iPad, has an Apple-issued digital certificate, correct?

17 A That's what it appears to describe.

18 MR. THOMAS: And if we could go to Page 5, please,
19 Mr. Diaz, second paragraph, first line.

20 Q (By Mr. Thomas) And do you see here, sir, where it
21 says: The startup process described above helps ensure that
22 only Apple-signed code can be installed on a device.

23 Do you see that?

24 A I see that.

25 Q So all iPhones and iPads are going to restrict what

1 software can be installed on that device; isn't that true?

2 A Yes, that's what that says.

3 MR. THOMAS: And if I could go to Page 8 at the
4 first line.

5 Q (By Mr. Thomas) And do you see, sir, where it says:
6 The secure boot chain and code signing and run time process
7 security all help to ensure that only trusted code and apps
8 can run on a device.

9 Do you see that, sir?

10 A I see that, but this is a document that applies to iOS,
11 right?

12 I mean, FairPlay and the iTunes Store and the iTunes
13 software can run on a multitude of devices that don't run
14 iOS, such as Mac and Windows PC machines.

15 Q When it's running on an iPad, sir, it's got to comport
16 to all of the requirements of this iOS system, right?

17 A That is correct.

18 Q And when it's running on an iPhone, it's got to comport
19 to all of the requirements of this iOS system, right?

20 A That is correct.

21 Q And over 90 percent of the products that we're accusing
22 of infringement in this case are iPhones or iPads.

23 Are you aware of that?

24 A I am aware.

25 Q And isn't it true, sir, that on an iPhone or iPad, it

1 has memory chips where this protected content that can be
2 downloaded from the iTunes Store can be kept?

3 A There's many memory chips. Which one?

4 Q Point being, sir, that you can't move a memory chip
5 from an iPhone or an iPad to another -- another device and
6 access that content, can you?

7 A Usually, no.

8 Q That's part of the physical security that's applied to
9 those devices as a requirement in the iOS operating system
10 design, correct?

11 A There's no requirement for physical security.

12 Q Do you think, sir, that the inability to install new
13 software without knowing that it comes with a trusted
14 certificate, you don't think that's some kind of physical
15 security?

16 A No. I believe that to be software security.

17 Q Okay. And so the software security, then, sir, do you
18 think that there's physical security associated with not
19 being able to move a memory chip from one iPhone to another
20 iPhone and access the content on that memory chip? Would
21 you call that physical security?

22 A No, I wouldn't.

23 Q What would you call that?

24 A I would call that cost reductions. I mean, it's
25 easier, right, and cheaper to solder the memory to the board

1 than to make it unscrewable.

2 Q Now, this document talks about iOS security, right?

3 A Yes, it does.

4 MR. THOMAS: So could I go to Page -- the fifth
5 paragraph on this Page 8, please.

6 Q (By Mr. Thomas) You see here, sir, where it says: The
7 UID allows data to be cryptographically tied to a particular
8 device. For example, the key hierarchy protecting the file
9 system includes the UID, so if the memory chips are
10 physically moved from one device to another, the files are
11 inaccessible.

12 That's part of the iOS security process, isn't it, sir?

13 A Yes. Specifically about that key hierarchy, yes.

14 Q And about the memory chips there, right, sir?

15 A Well, no, it says, if the memory chips are physically
16 moved. So, I mean, they can be moved. It's just that when
17 they are, specifically that key hierarchy can't be used.

18 Q So the files are inaccessible, as they say, so any of
19 the data on that memory chip can't be had, right?

20 A If they're protected with that key, that's correct.

21 Q Okay.

22 MR. THOMAS: And if I can go to Page 14, third
23 paragraph, please.

24 Q (By Mr. Thomas) And you see here, sir, it says --
25 second -- second line: To ensure that all apps come from a

1 known and approved source and have not been tampered with.

2 Does that sound like behavioral integrity to you, sir?

3 A Well, it doesn't really talk about installation.

4 Q To ensure that all apps that are coming to a device,
5 sir. You wouldn't download an app if you didn't want to
6 install it on a device, would you?

7 A I mean, I could back it up to a device.

8 Q Most people download apps because they want to install
9 them on their devices. Wouldn't you agree, sir?

10 A Most of them do, yes.

11 Q And then all of these iPhones and iPads say that if
12 you're going to do that, you've got to have it coming from a
13 known and approved source and have not been tampered with.
14 And it also says iOS requires that all executable code be
15 signed using an Apple-issued certificate.

16 Do you see that, sir?

17 A Yes, I do.

18 Q That applies to any executable code before it's
19 installed on an iOS device, doesn't it?

20 A Yes, that's correct.

21 Q So if somebody were to say that you could -- a normal
22 person could install on an iOS device, an iPad or an iPhone,
23 executable code without a digital certificate, that wouldn't
24 be true, would it?

25 A I don't understand the question.

1 Q In other words, sir, if somebody had said in this
2 courtroom that on an iPhone, you could download and install
3 executable code that does not come with a certificate
4 attesting to -- that source and that it has not been
5 tampered with, somebody testifies that executable code
6 without a certificate could be installed on an iPhone, would
7 that be true and would that be consistent with this manual?

8 A I mean, it would be consistent with the manual.
9 Internally at Apple, we have ways to install code that isn't
10 signed and that doesn't come with a certificate, so
11 there's -- there's Edge cases here.

12 Q So the Edge cases being if you're a special engineer at
13 Apple, right?

14 A That is one Edge case I can think of.

15 Q With special software tools, right?

16 A Yes.

17 Q But normal people like me who might have an iPad or an
18 iPhone, I'm not going to be able to download executable code
19 and install it on my device unless that code comes with a
20 digital certificate, right?

21 A That is correct. The document talks about the security
22 of the operating system because we care about the security
23 of our users and their data.

24 Q So if somebody were to say that wasn't true, if
25 somebody were to say that a normal consumer could download

1 and install on an iPhone or an iPad executable code that
2 does not come with a digital certificate, that person
3 wouldn't be making a true statement, would they?

4 A Again, it depends on the context. I mean, if it's --
5 if it's an internal user or if it's an attacker, obviously
6 both cases there's different reasons why we would want to --
7 or an attacker would want to be able to run code that isn't
8 signed.

9 Q So you're talking about an instance where somebody has,
10 like, hacked into the phone, sir, jail breaking it? Is that
11 what you're talking about?

12 A That's another example, yes.

13 Q I'm talking about all those other instances where
14 people are just using the devices as Apple designs them and
15 as Apple supplies them to them.

16 A I understand.

17 Q In that case, if somebody made the statement I just
18 reflected, they wouldn't be saying the truth, would they?

19 A Well, that would be an incorrect statement, unless I'm
20 missing information.

21 MR. THOMAS: Could I have up Slide ADX-6.14 from
22 your direct testimony, please?

23 Q (By Mr. Thomas) Do you see here, sir, where you've got
24 this description of Cloakware?

25 A Yes.

1 Q And I think you described Cloakware as being something
2 that Apple used to help enhance its DRM and protect the keys
3 and the content that the keys were connected to.

4 A It's a separate company, yes, and we use their
5 technology to protect our keys.

6 Q And you trust that their technology works because
7 you've employed it; you put it in all your devices, right?

8 A Yes. We -- we know how to use it, yes.

9 Q I mean, you trust that Cloakware knows what they're
10 doing whether they build this -- this software, right?

11 A Yes, we hope they do.

12 Q Yeah.

13 Well, you've been using Cloakware's technology pretty
14 long -- for quite awhile, haven't you?

15 A That is correct.

16 Q You ever had any problems with anything they provided
17 to you?

18 A We've had issues, but we worked with them to resolve
19 them.

20 Q Do you think that they know how their devices work and
21 their software works?

22 A I'm sure they do.

23 Q And do you think they probably know how it works more
24 than you?

25 A I think we both have an equal understanding of how the

1 technology works.

2 MR. THOMAS: Mr. Diaz, may I have that slide that
3 Mr. Baxter used, I believe, with Dr. Tribble regarding
4 Cloakware?

5 Q (By Mr. Thomas) See here, sir, this is a Cloakware
6 document. It says: Cloakware says trusted systems are
7 required.

8 And Cloakware says: A successful deployment of DRM
9 systems requires a trusted software component on the user's
10 computer or device to perform integrity checking, to decrypt
11 the content, and to enforce the usage rights associated with
12 digital content.

13 You would agree with that statement, wouldn't you, sir?

14 A It's very context dependent.

15 Q Do you think that overall, Cloakware knows what it's
16 talking about when it comes to successful deployment of its
17 software in DRM systems?

18 A They know what they're talking about, and they have a
19 variety of techniques of which we only use a subset.

20 Q Do you agree that DRM is all about trust, like they say
21 there in that second highlighted statement?

22 A I mean, I believe DRM is about having the proper
23 design, architecture, implementation, and robustness of the
24 software.

25 Q And do you -- do you agree, sir, that DRM involves a

1 chain of trust from content provider to publisher to
2 distributor to retailer to end user?

3 Do you agree with that?

4 A No, I disagree. You need more than just that.

5 Q Do you agree, sir, that trusted software is a key
6 requirement for any DRM system?

7 A Again, no, I disagree with that.

8 Q You don't think that the software has to be trusted in
9 order to have a useful and successful digital rights
10 management system? Is that what you just said?

11 A I -- I believe that if you're going with the Court's
12 construction of trusted, no, that's not sufficient.

13 Q Just trusted in the general sense, sir, as you were
14 using it -- I wasn't trying to get you to offer an opinion,
15 but if you could just -- in the general sense of the word
16 "trusted," do you think that trusted software is a key
17 requirement for a DRM system?

18 A I think it's important to define the term. If you're
19 going with trust as used in the iOS security document, that
20 means one thing. And even that is not enough for a DRM
21 system. It's enough for the operating system, but we
22 require a lot more than that in the DRM system.

23 Q I see, sir.

24 And you mentioned that the Court's definition of trust,
25 that was something that you think was -- was not -- not met

1 by this statement. Trusted software is a key requirement
2 for any DRM system. Is that what you said?

3 A What I said is I don't know what definition of trust
4 they're using in their document, and I also said that I
5 don't believe that trust, as defined in the claim
6 construction, is sufficient to build the DRM system.

7 Q You don't believe that the Court's construction of what
8 a trusted system is or the word "trust" is necessary to
9 build a successful DRM system? Is that what you said?

10 A No. It's not sufficient to build a DRM system such as
11 FairPlay, and -- and it's not the approach that we took to
12 build our system.

13 Excuse me. Yeah. We -- we rely on other techniques
14 and concepts to keep the FairPlay system safe and secure.

15 Q Sir, the SINFs -- the SINF, the security information
16 that is downloaded, that comes in the purchase response that
17 you were talking about earlier in your testimony, correct?

18 A That is correct, yes.

19 MR. THOMAS: And if I could have up, please,
20 ADX-6.33.

21 Q (By Mr. Thomas) So, for example, you showed us a
22 picture of what you described as a purchase response, and
23 that also includes the security information, the purchase
24 response, the SINF, correct?

25 A Yes, it does.

1 Q Now, that SINF is cryptographically signed, isn't it?

2 A It -- it depends what content we're talking about.

3 Q The SINF extension is cryptographically signed, isn't
4 it?

5 A When we're talking about a SINF extension, yes, the
6 SINF extension is signed.

7 Q And the SINF extension is what comes down with rented
8 content, correct?

9 A Yes. There's a SINF extension usually with rented
10 movies, yes.

11 Q And the SINF extension comes down with purchased
12 movies, right?

13 A In most cases, it does, yes.

14 Q And the SINF extension comes down with -- I apologize.
15 I was going to ask you rental movies -- with rental movies;
16 is that correct?

17 A Yes. There's a signature in the SINF extension for
18 rental movies.

19 Q And there's a signature in the SINF extension for TV
20 shows?

21 A Yes, from the -- the very old TV shows didn't have one,
22 but the majority of TV shows nowadays do have a signature in
23 the SINF extension, yes.

24 Q So the movies, both rented and purchased, and the TV
25 shows that are delivered from iTunes to a customer, come

1 with an SINF that has a digitally -- that is digitally
2 signed, correct?

3 A Yes. It has a signature. It has no certificate when
4 that signature is not used or verified during the
5 installation of the movie.

6 Q But that SINF or that signature has to be there for
7 that purchase response to be absorbed into the iTunes
8 system, correct?

9 A No, it doesn't have to be there for that.

10 Q Does it have to be there for the FairPlay software on
11 the device to use the information?

12 A At what point?

13 Q At any point.

14 A No. It only has to be there in a valid form for the
15 purpose of playing the movie. It doesn't have to be there
16 for being added to the iTunes library.

17 Q Good enough, sir.

18 So it's got to be there. That cryptographic signature,
19 that digital signature that accompanies a movie, a TV show,
20 or a rental movie has to exist for FairPlay to allow the
21 consumer to play that movie, TV show, correct?

22 A Yes, it has to be there, and it has to be valid for the
23 movie to play.

24 Q So all the content, TV shows, movies, rented or
25 purchased, to be played have to be accompanied by a digital

1 signature when they arrive on the customer's device,
2 correct?

3 A Yes.

4 Q What about for books, sir? Do books have a digital
5 signature as any part of their transaction?

6 A Only the SINF extension, again, in that book has one.
7 The rest of the book doesn't.

8 Q And in order for a consumer to be able to read that
9 book, that digital signature has to accompany the SINF
10 extension, which is part of the purchase response, correct?

11 A The SINF has to be present, and the signature only
12 attests to the validity of the SINF, not the book or the
13 movie or the TV shows.

14 Q But if that signature is not present, the customer
15 can't watch the movie, right?

16 A That is correct.

17 Q Can't play the TV show, right?

18 A That is correct.

19 Q Can't read the book, right?

20 A That is correct.

21 Q So if that SINF is not digitally signed, the customer
22 can't get what it paid for, right?

23 A I mean, they can get it; they can't watch it, if that's
24 what you mean.

25 Q They can't get what they paid for, right, which is the

1 opportunity to watch the TV show, movie, or read the book;
2 isn't that right, sir?

3 A Correct.

4 MR. THOMAS: I may have no more questions, Your
5 Honor. If I may just have a moment to check my notes?

6 THE COURT: Take a minute, Counsel.

7 (Pause in proceedings.)

8 MR. THOMAS: I have no further questions for this
9 witness, Your Honor. I pass the witness.

10 THE COURT: All right. Redirect, Mr. Pritikin?
11 You may proceed.

12 MR. PRITIKIN: Thank you, Your Honor.

13 REDIRECT EXAMINATION

14 BY MR. PRITIKIN:

15 Q Good afternoon, Mr. Fasoli.

16 A Good afternoon.

17 MR. PRITIKIN: Mr. Simmons, could we put up
18 PX-1043?

19 Q (By Mr. Pritikin) And you recall being asked about this
20 document, Mr. Fasoli, this document on iOS security?

21 A Yes, I do.

22 Q All right.

23 MR. PRITIKIN: And let's turn to Page 3 of the
24 document.

25 And let's go down to Page 4.

1 Excuse me. I'm sorry. Let's go back to Page 3.

2 Q (By Mr. Pritikin) And do you see there's a reference
3 there to app security?

4 A Yes, I do.

5 Q Can you remind us, what is an app?

6 A An app, it stands -- is short for application. And
7 they are typically applications that users buy for their
8 iPhone or their iPad from our App Store. And that could be
9 a game, for example, or a word processing application.

10 Q And do apps have to be -- could include digital
11 certificates to be installed on the iPhone?

12 A Yes, they do.

13 Q And what about changes to the -- what is the operating
14 system called on the iPhone and the iPad?

15 A It's called iOS.

16 Q And what about changes that are made to the iOS code?
17 Does that have to include a digital certificate?

18 A Yes, it does.

19 Q Okay. Now, let me direct your attention to the digital
20 works that are covered by FairPlay and that are the subject
21 of this lawsuit. Books, movies, do those include digital
22 certificates?

23 A No, they don't.

24 Q Can they be installed on the iPhone and the iPad
25 without digital certificates?

1 A Yes, they can.

2 Q Now, there were a number of questions that were asked
3 of you about the SINP, and let me go back to one of our
4 demonstratives.

5 MR. PRITIKIN: ADX-6.32.

6 Q (By Mr. Pritikin) By the way, is it possible for the
7 books and the movies to contain some kind of executable
8 code?

9 A Yes, it is.

10 Q And that could be installed on the phone or the iPad,
11 even though it doesn't include a digital certificate?

12 A Absolutely, yes.

13 MR. PRITIKIN: I'm sorry. This is not the --
14 6.32, Mr. Simmons. I think, perhaps, it's the prior one,
15 I'm sorry.

16 Excuse me, Your Honor. I want to get the right
17 slide up.

18 THE COURT: That's fine. Take a moment.

19 (Pause in proceedings.)

20 MR. PRITIKIN: Okay. My fault.

21 Q (By Mr. Pritikin) Now, you see on this slide what's
22 depicted as the purchase response coming down from the Apple
23 servers?

24 A Yes, I do.

25 Q Now, you were asked some questions about something

1 called a SINF, S-I-N-F. What is the SINF?

2 A The SINF -- excuse me -- SINF is a data structure that
3 has a few fields in it, one of which is the encrypted
4 content key, which is depicted in the green in the lockbox.

5 Q Now, does the SINF, the content key, does that have a
6 digital certificate in it?

7 A No, it doesn't.

8 Q And what -- what is the SINF extension? You were asked
9 some questions about that.

10 A We have two SINFs in the FairPlay system. We have an
11 older one that we call the legacy SINF, and the newer one
12 that we call the SINF extension. The SINF extension is the
13 newer kind.

14 Q And that's the content key -- includes the content key?

15 A It includes a copy of the encrypted content key as
16 illustrated here with the encrypted green lockbox.

17 Q Now, does that come from the Akamai servers with the
18 movie and the book?

19 A No, it doesn't. It comes from the Apple servers on the
20 top left.

21 Q Can the movies and the books that come from the Akamai
22 servers and that come down to the iPad, are those -- can
23 those be installed without the SINF?

24 A Yes, they can be installed, but they won't play with
25 the SINF.

1 Q My question is about installation, Mr. Fasoli. Are
2 they installed without the SINF?

3 A Yes.

4 Q And can they be installed even though they don't
5 include a digital certificate?

6 A Yes, absolutely.

7 Q Now, you were asked testimony about certain types of
8 executable code with reference to the manual we looked at a
9 few minutes ago.

10 Do you understand -- what is your understanding as to
11 what the executable code is that's being referred to in that
12 manual?

13 A The executable code that's referred to in this manual
14 is mainly around the third-party apps that are downloaded
15 from the App Store.

16 Q Now, do you recall being asked some questions about the
17 "kind" and the "isRental" fields that are in the purchase
18 response?

19 MR. PRITIKIN: Let's put that back up again,
20 Mr. Simmons.

21 A Yes, I remember.

22 Q (By Mr. Pritikin) And to be clear, are those used with
23 the iPhone or the iPad? Your testimony -- let me rephrase
24 that.

25 You were asked questions about whether -- if the "kind"

1 or the "isRental" fields were deleted, whether or not the
2 content could be played on the -- on the Mac and the PC. Do
3 you recall that testimony?

4 A I do.

5 Q And you recall that the screenshot that you used was
6 of a -- I believe it was of an app?

7 A Yes, it was.

8 Q Are the results any different if you're using an iPad
9 or an iPhone?

10 A No. They're the same.

11 Q And is -- is the "kind" or the "isRental" field, is
12 that used by FairPlay on the iPad or the iPhone to control
13 or restrict the use of the content?

14 A No, not when it's coming from the purchase response.

15 Q I believe you testified about tests or there were
16 questions about tests that were run on the -- was it on the
17 PC and the Mac?

18 A Yes.

19 Q All right. Now, in terms -- in -- in the course of the
20 normal product work that you do at Apple, do you also run
21 those tests on the iPad and the iPhone?

22 A Yes, I do.

23 Q And what happens in those tests if the "kind" or the
24 "isRental" field is deleted?

25 A The content is still playable.

1 Q And what are the "kind" and the "isRental" fields used
2 for on the iPad and the iPhone?

3 A They're used to organize the content on the user's
4 device so that it's easier for the user to find that content
5 and find out information about the content, such as the
6 title or the cast and crew.

7 Q Now, you were shown an excerpt from your deposition at
8 Page 137. Do you have a copy of that, Mr. Fasoli?

9 A I do not. Oh, wait. Maybe I do. Yes, I do.

10 Q Now, let me direct your attention to Page 137. I think
11 this is the portion that was read.

12 Now, the questions that you were answering here, do
13 these relate to the "kind" field that is in the purchase
14 response?

15 A No, they don't.

16 Q Can you explain what you were referring to here and
17 that you were asked about?

18 A Yes.

19 What I was talking about during this part of the
20 deposition was about another field that unfortunately is
21 also called the media kind, which is in the SINF. That is a
22 field that is used by FairPlay in some instances and is
23 distinct and independent from the "kind" field in the
24 purchase response.

25 Q And the testimony that you were giving there, did that

1 apply to the "kind" field in the purchase response that
2 carries over to the media library?

3 A No, it doesn't apply.

4 MR. PRITIKIN: Mr. Simmons, could we put up -- I
5 believe it's AX-8, Mr. Simmons.

6 That's it. Thanks.

7 And let's go back to the -- the passages that talk
8 about the secure container and the trusted system. Can you
9 pull those up, Mr. Simmons?

10 Q (By Mr. Pritikin) Mr. Fasoli, do you recall being asked
11 some questions about this on direct examination?

12 A Yes, I do.

13 Q And let's focus first on -- direct your attention to
14 the secure container language at the top, all right?

15 And then do you see the sentence after the various
16 conditions and terms are verified with the document
17 provider, the document is released to the user in clear
18 form?

19 A Yes, I do.

20 Q In the secure container approach, what is used to
21 maintain the security of the document and the -- and to
22 control it?

23 A We use encryption and keys.

24 Q Now, in the Apple system, if a document is -- if a
25 document were fully decrypted, that's not something you want

1 to have happen, correct?

2 A That is correct. We do not want to have that happen.

3 Q But if the document is fully decrypted, would it be in
4 the clear?

5 A Yes, it would.

6 Q And if a document is in the clear, can it be copied and
7 redistributed?

8 A Yes, it can.

9 Q Now, has Apple implemented some technology to address
10 the problem that is discussed here about the document being
11 in the clear?

12 A No. It's a very hard problem.

13 Q Well, have you tried to take some steps to address it?

14 A Yes. We've tried a few times. We're working on it
15 actively.

16 Q And you testified about something I think you called
17 decrypting a few frames at a time?

18 A Yes.

19 Q Does that help to address this problem?

20 A It does. It's the first step.

21 Q Now, the frames that are decrypted a few steps at a
22 time, are those in the clear after they're decrypted?

23 A Yes. After they're decrypted, they're in the clear
24 during the display to the user on the screen.

25 Q And how does Cloakware relate to this problem?

1 A There's not much that Cloakware can do to help us there
2 because that's beyond the realm of protecting the keys.

3 Q All right. Actually, I was asking you about the keys
4 themselves. How does Cloakware address the problem of the
5 keys being used to decrypt the document?

6 A Cloakware is very helpful with that because they have
7 technologies that allow us to hide keys from attackers.

8 Q Now let's look down at the bottom portion of this same
9 section that you were shown by Mr. Thomas under the trusted
10 system.

11 And I want to direct your attention to the language
12 further down here where it says about a trusted system; that
13 building a trusted system usually entails introducing new
14 hardware, such as a secure processor, secure storage, secure
15 rendering devices.

16 And then if you look further down, it says that one of
17 the problems is that existing computing environments, such
18 as PCs and workstations equipped with popular operating
19 systems, e.g., Windows, Linux, UNIX, and rendering
20 applications, such as browsers, are not trusted systems and
21 cannot be made trusted without significantly altering their
22 architectures.

23 Is FairPlay designed to work with these other types of
24 systems that the patent characterizes as untrusted?

25 A Yes.

1 Q And is that an important part of the way that iTunes is
2 managed and the business is conducted?

3 A Yes, it's a very important part. That's mainly how
4 we're able to reach all the customers that we have on the
5 Windows platform, whether it's PC laptops or PC desktops.

6 MR. PRITIKIN: Mr. Simmons, I'm not very good at
7 remembering the slide numbers. Can -- can we put up the
8 slide that shows the -- Mr. Fasoli's team on the left and
9 Mr. Ward's team going across? 25, I believe.

10 Q (By Mr. Pritikin) Now, what you've shown on this slide
11 is one way of the updated software getting from Mr. Ward's
12 team to the server team is with using an SSL channel.

13 Do you see that?

14 A Yes.

15 Q Now, when a digital -- an SSL channel is set up, can
16 digital certificates be exchanged to set up the channel?

17 A Yes.

18 Q Is that required?

19 A No, but it's usually a good way to do it that way.

20 Q Does Apple require the use of SSL channels for these
21 communications?

22 A No.

23 Q Now, when digital certificates are exchanged to set up
24 the channel, is that the same as including the digital
25 certificate in the software that's going to be installed and

1 sent through the channel?

2 A No. They're just exchanged for the purpose of
3 exchanging a key for the communication. It doesn't affect
4 the software that's sent over that communication channel.

5 Q Can you explain that difference to the jury between
6 including it in the software and using it to set up the
7 channel?

8 A Yes, of course. When SSL is used and certificates are
9 used in SSL for the purpose of the communication, they are
10 exchanged between the two end points and establish that
11 communications channel; whereas, when a certificate is used
12 to sign a piece of software, that actually alters the
13 software and ends up changing the nature of the software
14 after the signature.

15 Q Can software that does not include a digital
16 certificate be sent through the SSL channel?

17 A Yes, of course.

18 MR. THOMAS: Objection, Your Honor. This is
19 getting awfully close to expert testimony. It's not within
20 anything that we've established is his common practice.

21 THE COURT: I understand, Mr. Thomas. I'll allow
22 this question.

23 But, Mr. Pritikin, we're going to have to keep
24 this to factual inquiries.

25 MR. PRITIKIN: We are. I'm moving on, Your Honor.

1 THE COURT: All right.

2 Q (By Mr. Pritikin) And, now, I think you were asked how
3 you know that the software that's installed on the FairPlay
4 servers does not include a digital certificate. Do the
5 updates, the software updates, originate with you?

6 A Yes. For the FairPlay server software, they originate
7 with me and my team.

8 Q You write the software?

9 A That is correct.

10 Q Have you ever included a digital certificate in that
11 software to indicate that you were the person who wrote it?

12 A No, never in ten years.

13 MR. PRITIKIN: I have nothing further, Your Honor.
14 I pass the witness.

15 THE COURT: Additional cross?

16 MR. THOMAS: Yes, Your Honor.

17 May I have up that Slide 6.28, ADX-6.28?

18 RECROSS-EXAMINATION

19 BY MR. THOMAS:

20 Q You were asked some questions, Mr. Fasoli, about how
21 iTunes uses the "kind" field and the "isRental" field and
22 the "rental duration" fields.

23 Do you recall that?

24 A Yes, I do.

25 Q And isn't it true, sir, that iTunes, you said, uses

1 that information to organize the content? I believe that's
2 what you said, correct?

3 A Yes.

4 Q And isn't it true, sir, that what iTunes is doing is
5 there -- it's only presenting to the customer the music, TV
6 shows, or books that the customer has the right to watch or
7 read?

8 A No. I mean, the customer can have content they ripped
9 off a CD. I mean, it's content and pictures they got from
10 their phone. It can be anything.

11 Q I'm talking about DRM-protected content, sir.

12 A Okay.

13 Q That's the DRM-protected content that the customer
14 purchases from the iTunes Store, books, movies, or TV shows.
15 iTunes uses the "kind" and the "isRental" field and these
16 "rental duration" information to organize for the customer
17 only those titles, those TV shows, books, or movies that the
18 customer has the right to watch, right?

19 A No. There could be content from the Apple server or
20 from the iTunes Store there that is not playable by the user
21 because the machine is not authorized.

22 Q Follow me here, sir.

23 A normal person who's just -- I bought a bunch of stuff
24 from the iTunes Store, and I have purchased movies, books,
25 and TVs.

1 A Uh-huh.

2 Q And I go in there, and I hit the videos icon. iTunes
3 uses the information in this purchase response and in the
4 media library to present to me the movies that I have the
5 right to watch, correct?

6 A Yes. That doesn't necessarily mean they're playable,
7 but yes.

8 Q And it presents to me, if I hit the TV shows icon, the
9 TV shows that I have paid for the right to watch, correct?

10 A The ones you've purchased, yes.

11 Q Right. And if I hit the books icon, it presents to me
12 the books that I have the right to read because I've paid
13 for them, right?

14 A Again, it shows the ones that you've purchased, not
15 necessarily the ones that you can play.

16 Q But the ones that I paid for, right?

17 A Yes.

18 Q And I can't play them because they may not be
19 downloaded on to my device. Is that what you're saying?

20 A Or they can be downloaded and you may not have the key.

21 Q If I don't have the key, that's because my right to use
22 it has expired, correct?

23 A Or simply because you didn't authorize your machine.

24 Q It's my machine, sir. It's the machine I've been
25 watching these movies and -- and TV shows and books on since

1 I owned the machine on my account.

2 A So --

3 Q Ordinarily normal usage, not me trying to get some
4 content on to some other device, ordinary normal usage.
5 iTunes software -- not FairPlay software, iTunes software
6 uses the information in that purchase response and in the
7 media library to present to me the movies, the TV shows, the
8 books that I have paid for and I still have the right to
9 view or play back, correct?

10 A iTunes will show you what you've purchased. iTunes
11 does not enforce the playback rules.

12 Q iTunes will show me what I have the right to watch,
13 correct, sir?

14 A Yes.

15 Q And so that's what iTunes is doing with the information
16 in the media library. It is displaying for me and
17 organizing for me the content: Videos, if I've hit the
18 videos icon; rentals, if I've hit the rentals icon; books,
19 if I've hit the books icon.

20 But it will only display for me those titles that the
21 media library says I still have the right to watch because I
22 paid for it, right?

23 A No. To be clear, it will show any and all content
24 you've purchased. It will not only show you the content you
25 can play.

1 Q If I purchased it, you're saying I can't play it?

2 A There may be instances in which you can't, that's
3 correct.

4 Q That's not normal instances, is it, sir?

5 A Again, iTunes does not know. It leaves that up to the
6 FairPlay software.

7 Q iTunes is going into that media library and pulling
8 out the titles, the movies, the TV shows, and books that it
9 thinks I have paid for, right?

10 A Yes.

11 Q And if I paid for them, don't you think it's a pretty
12 good assumption that I should have the right to watch it?

13 A iTunes doesn't make an assumption. It relies on
14 FairPlay to enforce the right to play.

15 Q Don't you think it's a pretty good assumption, sir, for
16 me, as the consumer, that if I pay for something, I think my
17 iPad is probably going to let me watch it if I -- if they --
18 if Apple's taken my money for it?

19 A I mean, that may be your assumption as a user, but,
20 again, iTunes does not make any assumptions. It leaves that
21 up to FairPlay.

22 Q The iTunes and FairPlay DRM scheme together, they're
23 trying to make a good experience for a user; isn't that
24 right, sir?

25 A That's correct.

1 Q You think it would be a good experience for a user if
2 the user can't watch what they pay for?

3 A No, it wouldn't.

4 Q No.

5 So iTunes and FairPlay together as the accused
6 infringing system in this case, that's trying to present to
7 the users whatever they've paid for so that they have a good
8 experience, right?

9 A Yes. They show what you paid for.

10 MR. THOMAS: Now, if we could go to PX-1043,
11 please.

12 And if I could go to Page 15 at the top, top
13 three -- second line.

14 Q (By Mr. Thomas) And if you could go to that page,
15 please, with me, Mr. Fasoli. Tell me when you're there.

16 A I'm there.

17 Q You see here, sir, it says: Unlike other mobile
18 platforms, iOS -- which is iPhones and iPads, correct, sir?

19 A Yes.

20 Q -- does not allow users to install potentially
21 malicious unsigned apps from websites or run untrusted code.

22 Do you see that?

23 A Yes, I do.

24 Q And it says: At run time, code signature checks if all
25 executable memory pages are made as they are loaded to

1 ensure that an app has not been modified since it was last
2 installed or updated.

3 All executable memory pages would include any malicious
4 code that got somehow inserted by Akamai into one of your
5 movies or TV shows, wouldn't it, sir?

6 A No, it would not. This is in the context of apps and
7 executables that come with the OS or purchased through the
8 App Store. It does not include the movies.

9 Q So you're saying, sir, that there's no check at run
10 time of the executable memory pages that might be part of a
11 movie file?

12 A That is correct.

13 Q And how might this malicious code get inserted into
14 these movie files, sir? By Akamai?

15 A It could be by Akamai, or it could be by someone that
16 compromised Akamai, for example.

17 Q Okay. How long have you been at Apple, sir?

18 A For over 10 years.

19 Q How many times have you seen anybody compromise Akamai
20 and insert malicious code into movies that a customer got
21 downloaded?

22 A Never.

23 Q So it's not very likely that there's going to be
24 malicious code that needs to have a digital certificate when
25 a movie gets presented, right?

1 A That is correct.

2 Q In fact, you've never had it happen, and you've never
3 seen it happen in 10 years, right?

4 A That's correct.

5 Q But that was the hypothetical that you just answered
6 Mr. Pritikin with, right? You said, if there's malicious
7 code that's inserted into a movie file, for example, then
8 that could get run, and it could run havoc with that device.
9 That's what you told him, right?

10 A That is what I said, because it's a possibility.

11 Q But not a possibility that you've ever seen happen in
12 your 10 years of experience at Apple, right, sir?

13 A That is correct.

14 Q And not a possibility you've ever heard anybody else
15 tell you has happened in your 10 years of experience at
16 Apple, right?

17 A That is correct.

18 Q Sir, you were asked some questions a moment ago going
19 back to this secure container issue.

20 Now, Apple knows how to build a secure container
21 because that's what it does with DRM-free music; isn't that
22 right?

23 A That's what we do with our whole system DRM to our
24 DRM-free.

25 Q You -- are you saying, sir, that Apple has the same

1 restrictions and usage rights on DRM-free music that it has
2 on movies?

3 A I'm saying we use the same files on the Akamai server,
4 whether we sell them DRM or DRM-free.

5 Q Does Apple have the same restrictions and usage rules
6 on DRM-free music that it has on movies?

7 A No.

8 Q Does Apple have the same restrictions and usage rights
9 on books that it has on DRM-free music?

10 A No.

11 Q Does Apple have the same restrictions and usage rights
12 on TV shows that it has on DRM-free music?

13 A No, sir.

14 Q In fact, with DRM-free music, once it arrives at a
15 customer, it is encrypted -- I'm sorry -- decrypted and
16 never re-encrypted, right?

17 A For DRM-free music, that's correct, yes.

18 Q It sits on the customer's device completely clear,
19 completely unencrypted once it gets on that customer's
20 device. That's how Apple sells DRM-free music since April
21 of 2009, right?

22 A Correct.

23 Q That's not how Apple sells DRM-protected movies, is it?

24 A No.

25 Q That's not how Apple sells DRM-protected books, is it?

1 A No.

2 Q That's not how Apple sells DRM-protected TV shows, is
3 it?

4 A Well, I mean, again, the content is the same, but the
5 usage rights come in different ways.

6 Q There are no usage rights on DRM-free music once it's
7 decrypted, right, sir?

8 A There's something that instructs the user's device to
9 strip the DRM off during the download or after the download
10 for a DRM-free piece of music.

11 Q And after that encryption is stripped off, it's never
12 re-encrypted, right?

13 A That is correct.

14 Q And somebody can move that content anywhere they wanted
15 in unencrypted form, right?

16 A That is correct.

17 Q That can't happen with DRM-protected movies, can it?

18 A Well, they can move it whenever they want. It won't
19 play. It's --

20 Q It's unencrypted, sir.

21 THE COURT: Just a minute.

22 Mr. Thomas, let the man finish his answers.

23 MR. THOMAS: Yes, sir.

24 A Yeah, the --

25 THE COURT: We just have got to make sure that you

1 talk one at a time. And this is not the first time you've
2 talked over the witness. Let him finish his answers.

3 MR. THOMAS: Yes, Your Honor.

4 THE COURT: Ask your next question.

5 Q (By Mr. Thomas) DRM-free music, once it's decrypted, is
6 free and clear on the user's device, correct?

7 A That is correct.

8 Q DRM-protected movies are never free and clear on the
9 user's device if -- if FairPlay and iTunes works as it's
10 supposed to, right?

11 A That's correct.

12 Q DRM-protected books on the user's device are never free
13 and clear if FairPlay and iTunes works as it's designed,
14 right?

15 A That is correct, sir.

16 Q And the same thing for TV shows, right?

17 A Yes, sir.

18 MR. THOMAS: If I could go to Slide 6-25 for
19 Mr. Fasoli's direct examination.

20 Q (By Mr. Thomas) Now, sir, this -- under the middle
21 column here, you said SSL or hand delivery.

22 Do you see that?

23 A Yes.

24 Q That was from Mr. Ward's team to the server team?

25 A That is correct.

1 Q Mr. Ward -- so you're saying one option Mr. Ward had
2 was to hand deliver the software to the server team?

3 A That is correct.

4 Q And would he do that in an evidence bag?

5 A No.

6 Q Do you know where all of the servers, the Apple DRM
7 servers are located in this country, sir?

8 A I know there are some on the East Coast and some on the
9 West Coast.

10 Q So you think it's likely -- and Mr. Ward, he's in
11 California, right?

12 A Occasionally, yes.

13 Q And Mr. Ward is -- well, when you walk it across to
14 Mr. Ward's team, that's in California in the evidence bag,
15 right?

16 A Absolutely.

17 Q But half of the Apple DRM servers are in North
18 Carolina; they're not in California, are they?

19 A Correct. That's why we use the server team.

20 Q Right. So there's never any hand delivery of updated
21 software for the FairPlay DRM servers to the server team in
22 North Carolina, is there?

23 A The server team is in California right next to us, too.

24 Q And so the server team has to deliver the updated
25 content from California to North Carolina, right?

1 A They perform electronic copies, yes.

2 Q They -- they transmit it, right?

3 A That is correct.

4 Q And they transmit it using appropriate security
5 protections because they don't want that to be corrupted
6 somehow or hacked, right?

7 A Correct.

8 Q Because what would happen, sir, if the DRM software,
9 the FairPlay software on those FairPlay servers was hacked
10 or corrupted or somebody got in there and maliciously
11 changed that code? That would be a terrible thing for
12 Apple, wouldn't it?

13 A That would be unfortunate, yes.

14 Q It would be more than unfortunate. That could actually
15 risk exposing a lot of customer information, couldn't it?

16 A It's more about the content.

17 Q It could risk exposing all the movies that the movie
18 studios have trusted Apple to protect, correct?

19 A Yes.

20 Q It could risk exposing all the books that the book
21 publishers have trusted Apple to correct, right?

22 A Yes.

23 Q So if that happened, it's likely that Apple's iTunes
24 Store wouldn't be in business for very much longer, would
25 it?

1 A We would have issues, yes.

2 Q Big issues, right?

3 A Yes.

4 MR. THOMAS: I have no further questions, Your
5 Honor. I pass the witness.

6 THE COURT: Additional redirect?

7 MR. PRITIKIN: I have nothing further, Your Honor.
8 I pass the witness.

9 May we have Mr. Fasoli excused?

10 THE COURT: Well, you may step down.

11 And if there's -- unless there's objection, he may
12 be excused.

13 MR. THOMAS: We do have him on our list for
14 potential rebuttal witnesses, Your Honor, depending on what
15 the rest of the testimony elicits.

16 THE COURT: All right. You're not prepared to
17 release him at this point?

18 MR. THOMAS: That's correct, Your Honor.

19 THE COURT: All right. You may step down,
20 Mr. Fasoli, but you're not released.

21 THE WITNESS: Thank you, Your Honor.

22 THE COURT: Ladies and gentlemen of the jury,
23 we're going to take a short recess. You may leave your
24 notebooks in your chairs. Don't discuss the case among
25 yourselves. I hope the electricity will be on when you come

1 back in here.

2 Take a few minutes, stretch your legs, get a drink
3 of water, and we'll continue in a moment.

4 You're excused for recess.

5 SECURITY COURT OFFICER: All rise for the jury.

6 (Jury out.)

7 THE COURT: Court stands in recess.

8 (Recess.)

9 COURT SECURITY OFFICER: All rise.

10 THE COURT: Be seated, please.

11 Mr. Pritikin, is the Defendant prepared to call
12 their next witness?

13 MR. PRITIKIN: Yes. But I misspoke, Your Honor.
14 There is a very short deposition first and then Alan Ward.

15 THE COURT: How long is your deposition witness?

16 MR. PRITIKIN: Oh, I think it's only --

17 MS. SMITH: We propose to read it into the record,
18 Your Honor, and it's just slightly over one page.

19 THE COURT: All right. Well, we've had one minute
20 from the Plaintiff. We'll see if you can top that. We'll
21 do that, and then you're prepared -- you propose to call
22 Mr. Ward?

23 MR. PRITIKIN: Yes, sir.

24 THE COURT: All right. Let's bring in the jury,
25 please, Mr. Nance.

1 COURT SECURITY OFFICER: All rise for the jury.

2 (Jury in.)

3 THE COURT: Please be seated.

4 All right. Defendant, call your next witness.

5 MS. SMITH: Your Honor, Apple calls Mr. Sean
6 Kelly. Mr. Kelly is an Apple software engineer. And we
7 propose to read Mr. Kelly's deposition testimony into the
8 record.

9 THE COURT: So you're calling the witness by
10 deposition?

11 MS. SMITH: Yes, Your Honor.

12 THE COURT: Mr. Chandler is going to play his part
13 and read the answers?

14 MS. SMITH: Please, Your Honor.

15 THE COURT: All right. Proceed when you're ready,
16 Ms. Smith.

17 MS. SMITH: Thank you.

18 (Deposition of Sean Kelly read.)

19 QUESTION: Good morning, sir. Can you please
20 state your name for the record.

21 ANSWER: Sean Kelly.

22 QUESTION: Okay. Where do you work, Mr. Kelly?

23 ANSWER: I work at Apple.

24 QUESTION: And what's your title at Apple?

25 ANSWER: Software's engineer.

1 QUESTION: How long have you been a software
2 engineer at Apple?

3 ANSWER: I started as an intern in 2005.

4 QUESTION: I'm going to hand you what's been
5 marked as Exhibit 1. And Exhibit 1 is a document. It's
6 a -- I'll hand it to you first. It's a document that is a
7 printout of a rental.XML file with line numbering.

8 Based on your review, what is Exhibit No. 1?

9 ANSWER: It appears to be an XML Property List
10 similar to what we receive in the purchase response.

11 QUESTION: The authentication response, okay, does
12 the -- does the P-List that's in Exhibit 1 have a name that
13 Apple uses?

14 ANSWER: I would call this a purchase response.

15 QUESTION: Do you know if the -- the "Rental
16 Expiration Seconds From Now" is used on the iOS devices?
17 And I'm looking specifically as Exhibit -- at Exhibit No. 1
18 at the key at 61.

19 ANSWER: I don't believe it is. I would need to
20 check the code to be sure.

21 QUESTION: Okay. Are the rental fields stored in
22 the media library?

23 ANSWER: Not to my knowledge.

24 (End of deposition.)

25 MS. SMITH: Your Honor, that concludes our offer.

1 THE COURT: All right. You may step down,
2 Mr. Chandler.

3 Defendant, call your next witness.

4 MR. PRITIKIN: Yes. Our next witness, Your Honor,
5 we call Alan Ward.

6 THE COURT: All right. Has he been sworn,
7 Mr. Pritikin?

8 MR. PRITIKIN: I believe he has, Your Honor, yes.

9 THE COURT: All right. Mr. Ward, if you'll come
10 forward.

11 Have you been sworn, sir?

12 THE WITNESS: I have, sir.

13 THE COURT: Please come around then and have a
14 seat at the witness stand.

15 All right. Mr. Pritikin, you may proceed.

16 ALAN WARD, DEFENDANT'S WITNESS, PREVIOUSLY SWORN

17 DIRECT EXAMINATION

18 BY MR. PRITIKIN:

19 Q Good afternoon, Mr. Ward.

20 A Good afternoon.

21 Q Could you please introduce yourself to the jury.

22 A Yes. My name is Alan Ward.

23 Q And who do you work for?

24 A I work for Apple.

25 Q What is your current position at Apple?

1 A I'm an engineering manager in the iTunes server group.

2 THE COURT: Let me interrupt just a minute.

3 Ladies and gentlemen of the jury, you may recall
4 the Plaintiff presented testimony from this witness by
5 deposition earlier. Each party has the option of calling
6 their witness live or by deposition. The fact that one
7 appeared by deposition and one appeared live should not
8 affect your consideration of the evidence that is offered at
9 each opportunity.

10 All right. Go ahead, Mr. Pritikin.

11 MR. PRITIKIN: Thank you, Your Honor.

12 Q (By Mr. Pritikin) And, Mr. Ward, could you stay close
13 to the microphone there?

14 A Yes.

15 Q When you get away, you can't hear.

16 When did you join Apple?

17 A I joined Apple in September 2002, just over 13 years
18 ago.

19 Q Have you always worked in the same area at Apple?

20 A I have. I worked on the iTunes Store ever since I
21 joined.

22 Q Does anyone report to you currently?

23 A Yes. I currently have five employees and one vacancy.

24 Q And can you tell us generally what you do.

25 A My team handles mostly the service, like DRM and

1 security aspects of the iTunes Store, amongst other things.

2 Q Can you briefly describe your educational background?

3 A Yes. I have a bachelor in computer science from the
4 University of London in England.

5 Q Are you originally from England?

6 A I am, yes.

7 Q What is the iTunes Store today?

8 A It's a place where Apple customers and people with
9 other types of hardware can go and buy music, movies, books,
10 and applications for -- for iPhones and iPads.

11 Q Did the iTunes Store exist when you joined Apple back
12 in 2002?

13 A No, it did not.

14 Q Before Apple launched the iTunes Store, how did users
15 get music to play on their iPods and their computers?

16 A There were two primary ways, either by copying the
17 music from CDs, presumably that people had purchased, or
18 some people were downloading music online, but that was
19 predominantly from sites that were selling it illegally or
20 giving it away illegally.

21 Q When you joined Apple in 2002, did you work exclusively
22 on developing the new iTunes Store for selling digital
23 content over the Internet?

24 A Yes, I did.

25 Q And how many other people worked with you to create the

1 iTunes Store?

2 A There were seven of us in total, so myself and six
3 others.

4 Q When did Apple launch the new iTunes Store for selling
5 music over the Internet?

6 A April 28th, 2003.

7 Q How long did it take you and the others to create the
8 iTunes Store?

9 A It had been about seven months at that point.

10 MR. PRITIKIN: Let's take a look at the next
11 slide.

12 Q (By Mr. Pritikin) And can you tell us what we're
13 looking at here?

14 A This is the front page of the iTunes Store, I believe
15 it was on the day we launched, April 28th, 2003.

16 Q Did the new iTunes Store for selling digital content
17 include any DRM?

18 A It did, yes.

19 Q And what was that called?

20 A It was called FairPlay.

21 Q What, if any, involvement did you personally have in
22 the creation of the first version of FairPlay back in 2002?

23 A I wrote the code that ran on the server side of
24 FairPlay.

25 Q When you were designing and implementing the new iTunes

1 Store in 2002, can you explain to the jury what your primary
2 goals were with respect to DRM?

3 A To keep it simple and frictionless. Basically, we were
4 competing against services that were free and that were
5 giving away music with no DRM, and so we had to provide
6 something that was compelling in order for people to pay for
7 it. And if the DRM were to be an obstacle to people
8 enjoying the content they purchased, it would not be a good
9 thing.

10 Q And why was it important to Apple that the -- I think
11 the word you used was "frictionless" -- that the user
12 experience be frictionless?

13 A Because, as I say, we were competing against people
14 giving away MP3s that could be freely copied, so if somebody
15 were to buy a song for us and not be able to play it, they'd
16 be unlikely to continue buying songs from us.

17 Q At the time that you designed FairPlay, were there a
18 variety of different ways that you could have implemented
19 DRM for the iTunes Store?

20 A Absolutely, yes.

21 Q And what was your goal?

22 A Our goal was to keep it very simple and transparent for
23 our customers.

24 Q What do you mean when you describe it as simple?

25 A Not complex.

1 Q I mean, what were the key elements?

2 A We went with a very simple scheme where we encrypted
3 the content and then only gave the keys to people who are
4 authorized to use them.

5 Q How secure a system were you trying to design?

6 A Just secure enough, basically. We -- we didn't want
7 people freely copying the content that they purchased, but
8 we weren't trying to protect any national security secrets
9 or anything.

10 Q Did you design the iTunes Store to work with both Mac
11 computers and Windows PCs?

12 A Originally, it was just for -- for Mac computers, and I
13 think we launched a Windows version in October of 2003, so
14 some months afterwards.

15 Q Was that about six months later?

16 A Yes.

17 Q And did the iPhone and the iPad exist back then?

18 A No, they did not.

19 Q Why did Apple want the iTunes Store and FairPlay to
20 work with Windows computers?

21 A There were far more Windows computers out there than
22 Macs at that point in time, so in order to address a larger
23 market, we really had to do a Windows version of iTunes.

24 Q When the new iTunes Store for selling digital content
25 was launched in 2003, was it successful?

1 A Very successful, yes.

2 Q Now, have you received any patents for your work on the
3 iTunes Store, Mr. Ward?

4 A I have. I filed, I think, 17 patents of which 11 or
5 12, I think, have been granted at this point.

6 Q Is the server software that runs iTunes and FairPlay
7 updated from time to time at Apple?

8 A It is. It's usually updated every two weeks.

9 Q Are you personally involved in the process of updating
10 the Apple servers?

11 A Either myself or somebody on my team would be, yes.

12 Q And are you familiar with digital certificates?

13 A I am, yes.

14 Q Do the servers that Apple run, iTunes and FairPlay,
15 require software to include a digital certificate in order
16 to be installed on those servers?

17 A No, they do not.

18 Q Have Apple servers, to your knowledge, ever required
19 the iTunes or FairPlay software to include a digital
20 certificate in order to be installed?

21 A No.

22 Q How does Apple know that it's not installing a virus or
23 some other malicious code on to these servers?

24 A It's based on personal trust. We're a small group of
25 people who all know each other, and we've worked together

1 for a long time.

2 Q And why does Apple rely on personal trust, instead of
3 requiring a -- the software to include a digital
4 certificate?

5 A It's more straightforward. Digital certificates create
6 an overhead that we didn't deem necessary.

7 MR. PRITIKIN: Let's go to the next slide.

8 Q (By Mr. Pritikin) Now, using this slide, can you
9 explain to the jury the process of how the FairPlay server
10 software is updated, starting on the left side?

11 A Yes. Mr. Fasoli's team delivers software to my team.
12 They do that by burning it on to a CD and putting it in a
13 plastic bag.

14 Q And does the software that you get from Mr. Fasoli's
15 team include a digital certificate?

16 A No, it does not.

17 Q And, again, how do you know that they're not giving you
18 software that has a virus or some other malicious code in
19 it?

20 A Just by nature of the fact that we trust them.

21 Q What does your team do with the code that you receive
22 from Mr. Fasoli's team?

23 A They take that code and -- and they combine it with
24 code that is written by my team, and they create the -- the
25 final deliverable that -- that is installed into our

1 production environment.

2 Q Does your team add a digital certificate before you
3 transmit it to the server team?

4 A No, we do not.

5 Q Does the software include a digital certificate? Is it
6 included at any time before it is installed?

7 A No.

8 Q Now, at the time that you were deposed in this case,
9 how were you transferring the updated FairPlay server code
10 to the server team?

11 A I was doing it by the most convenient means at that
12 point, which was using an application called Messages, which
13 is an instant messaging app.

14 Q And is the Messages program used to install software?

15 A No, it is not.

16 Q What is it used for?

17 A It's merely used for communicating between members of
18 different teams.

19 Q Is that to send it from your team to the server team?

20 A We do usually send that through Messages as well, yes.

21 Q Now, does the Messages program use something called
22 SSL?

23 A It can, yes.

24 Q Is that an optional feature of Messaging?

25 A Yes.

1 Q What is SSL?

2 A SSL stands for Secure Sockets Layer, and it is an
3 encrypted channel of communication between two end points.

4 Q And what's the purpose of it?

5 A It's really to stop people eavesdropping on the
6 conversation.

7 Q From getting into what's being transmitted through the
8 channel?

9 A Yes.

10 Q What do you mean by secure connection?

11 A Encrypted.

12 Q And what's the purpose of that?

13 A Because if anybody were able to listen to the network
14 traffic, if it was not encrypted, then they would be able to
15 see what was being communicated.

16 Q How does the server team install the new software that
17 your team sends to them?

18 A The person in the server team doing the installation
19 has a -- an automated script that they run which effectively
20 copies that -- that program to each and every machine that
21 needs it.

22 Q And do they include a digital certificate before they
23 install it?

24 A No, they do not.

25 MR. PRITIKIN: Let's go to the next slide.

1 Q (By Mr. Pritikin) Now, can digital certificates be used
2 to set up an SSL connection between Point A and Point B?

3 A Yes.

4 Q And is using a digital certificate to establish the
5 secure connection the same thing as including a digital
6 certificate in software that is sent over that connection?

7 A No, it is not.

8 Q And can you explain the difference?

9 A The digital certificate establishing the connection
10 establishes the identity of the machine that you're
11 connecting to; whereas, the digital certificate used to sign
12 software verifies that the software hasn't been changed or
13 tampered with since it was assigned by the developer.

14 Q Once an SSL connection is established like that, can
15 you transmit software across it that does not include a
16 digital certificate?

17 A Yes, you can.

18 Q Can you transfer a virus over an SSL connection and
19 install that on a computer?

20 A Yes, you can.

21 Q Does an SSL connection stop malicious software from
22 being installed on Apple's computers?

23 A No, it does not.

24 MR. PRITIKIN: Let's go back to the prior slide.

25 Q (By Mr. Pritikin) When your team transfers the updated

1 FairPlay server software to the server team, does Apple
2 require your team to use SSL to transfer that software?

3 A No, they do not. I've used a number of different ways
4 over the years to deliver that software.

5 Q In the past, have you transferred updated FairPlay
6 server software to the server team without using an SSL or a
7 secure connection?

8 A Yes. For a number of years, we didn't use SSL until --

9 Q And how would you do it?

10 A We have hand-delivered the software before, or more
11 commonly, we would just copy it to a shared file system and
12 tell the person in the server team where to find it, and
13 then they could copy it themselves.

14 Q How does the server team know that they're not
15 installing software that's been corrupted or that includes a
16 virus or other malicious code?

17 A They don't. They have to rely on personal trust.

18 Q Do they install whatever you send them?

19 A They do.

20 Q What is SVN?

21 A SVN is Subversion, which is a source code version
22 control system.

23 Q Is SVN used at Apple to archive old versions of
24 FairPlay?

25 A It is, yes.

1 Q And do you install any FairPlay software updates from
2 SVN?

3 A No, we do not.

4 MR. PRITIKIN: We can take this down, Mr. Simmons.

5 Q (By Mr. Pritikin) What's the relationship between the
6 FairPlay servers and the iTunes Store servers?

7 A The FairPlay servers are really a subset of the entire
8 iTunes Store that are -- have -- perform a specialized task.

9 Q And do the FairPlay servers deal with DRM?

10 A They do, yes.

11 Q And how would you describe the iTunes servers?

12 A The iTunes servers deal more generally with creating
13 the pages that you can see when you're browsing the store
14 and -- and performing the commerce transactions so that when
15 you decide to buy something, we can collect payment for it
16 and then deliver the -- the result to you.

17 Q Does Apple require software updates to the iTunes Store
18 servers to include a digital certificate in order to be
19 installed?

20 A No.

21 Q Are the software updates for the iTunes Store servers
22 transmitted using a secure connection?

23 A I believe they're transferred over SSH, which is an
24 encrypted connection, yes.

25 Q And is that similar to SSL?

1 A It's similar, but it does not use a certificate.

2 Q Okay. That's what I was going to ask you. Does SSH
3 require the use of digital certificates to set up this
4 connection?

5 A No, it does not.

6 Q Do the engineers working on the iTunes Store servers
7 ever include digital certificates to establish an SSH
8 connection?

9 A No.

10 Q And why not?

11 A Again, as I mentioned before, it's an overhead that we
12 deemed unnecessary, that requires management. The
13 certificates expire. You have to have somebody that
14 replaces them before they expire, and it just creates a
15 point of failure that we deemed unnecessary in our
16 environment.

17 Q Using SSH, can you transfer software that does not
18 include a digital certificate and then install it without a
19 digital certificate on the Apple iTunes Store servers?

20 A You can, yes.

21 Q Now, if one of ContentGuard's experts in this case told
22 the jury that software is required to include a digital
23 certificate in order to be installed on Apple's iTunes Store
24 or FairPlay servers, would that be accurate?

25 A No.

1 MR. PRITIKIN: I pass the witness, Your Honor.

2 THE COURT: Cross-examination?

3 MR. THOMAS: Yes, Your Honor.

4 CROSS-EXAMINATION

5 BY MR. THOMAS:

6 Q Good afternoon, Mr. Ward.

7 A Good afternoon.

8 Q Mr. Ward, do you recall that you were deposed in this
9 case?

10 A I do, yes.

11 Q Have you reviewed your deposition testimony before you
12 got up here on the stand?

13 A Yes, I have.

14 Q Okay. And we asked you in your deposition how the
15 software is sent to the DRM servers once you receive it from
16 Mr. Fasoli.

17 Do you recall that?

18 A I don't recall you asking that. I recall you asking
19 how I sent it to the member of the server team.

20 Q Very good.

21 How do the --

22 MR. THOMAS: Well, if we could bring up the slide
23 where we have the server team.

24 Q (By Mr. Thomas) Your server team.

25 A Uh-huh.

1 MR. THOMAS: Mr. Diaz, please.

2 Q (By Mr. Thomas) Now, you didn't describe this server
3 team -- this last hop, this last arrow over here to the
4 right, you didn't describe how that was uploaded from the
5 server team to the Apple DRM servers, did you?

6 A I wasn't asked that, I don't believe.

7 Q All right. You didn't describe it, though, did you?

8 A I don't believe I did, no.

9 Q And with respect to all of the activity that you did
10 describe, you haven't shown us any Apple documents to back
11 up what you're saying in your testimony, did you?

12 A I'm not aware of any Apple documents.

13 Q Okay. And you're not -- I'll ask the next question,
14 sir. I was just waiting to make sure that you were
15 finished.

16 With respect to each of the steps that you show on this
17 document, you didn't point us to any of the actual source
18 code that controls how the software is electronically
19 transmitted from your team to the FairPlay server team to
20 the Apple DRM servers, did you?

21 A I'm not sure what source code you're looking for.
22 There is no source code in my possession that -- that does
23 that.

24 Q It would be some sort of protocol for moving that data
25 electronically, right, sir?

1 A Well, you click on it with a mouse, you drag it on to
2 the Messages application and drop it.

3 Q And when you click on it, there's some computer code
4 that's going to do something behind that click, isn't there?

5 A Absolutely.

6 Q And you didn't show us what that computer code was, did
7 you?

8 A I have no knowledge of what that computer code is.

9 Q But you're on your computer, though, sir, right?
10 You're the one that does the click. You're the one that's
11 got that application loaded on your computer that moves it
12 from your Ward team to the server team; is that correct?

13 A That is correct.

14 Q And it's your computer in your control; you know what
15 applications are on it, right?

16 A I don't have the source code for all the applications.

17 Q You know what the information is, though, and you know
18 what the system admin requirements are, for example, and
19 what conditions can be set or not set for moving that
20 information across that channel, right?

21 A I think you may be missing the point. I'm not required
22 to use the Messages application. I could actually walk it
23 down the hall. So I'm not sure what source code you're
24 asking me to provide.

25 Q When you used the Messages application, that's what we

1 call the iChat or what used to be called iChat, right?

2 A It did used to be called iChat, yes.

3 Q And there is source code that runs iChat, correct?

4 A Correct.

5 Q And you didn't talk about that source code; you didn't
6 show us any of that iChat source code today, did you?

7 A I have never seen the iChat source code, so I'm not --
8 I can't tell you much about it.

9 Q iChat source code is owned by Apple, isn't it, sir?

10 A It is.

11 Q And it was developed by Apple, wasn't it, sir?

12 A Yes.

13 Q And you could have asked for it, couldn't you?

14 A No. I don't have access to it, in much the same way as
15 other people at Apple have access to the source code that my
16 team writes.

17 Q Are you saying, sir, that you could not have made a
18 request to get access to that source code?

19 A I have no idea. I've never tried.

20 Q Did you try to make a request, sir, to get to the
21 source code that would establish exactly how the information
22 is moved from your team electronically to the server team?

23 A Nobody asked me to.

24 Q Did you ask for it yourself, sir?

25 A No. I had no reason to.

1 Q You could have made that request, though, right, sir?

2 A I could have made the request. I don't know whether it
3 would have been granted or not.

4 Q Well, certainly, sir, you know it's a pretty big issue
5 in this case, right?

6 A I don't believe it is, because I'm not -- I'm not
7 required to use that application to deliver the source code,
8 so I could use any other method.

9 Q Putting aside whether you're required to, sir, you did
10 use that application to deliver the source code, right?

11 A Commonly used now, yes.

12 Q Okay. And you know that was an issue in this case,
13 right?

14 A Not until after my deposition, no.

15 Q And after your deposition, which was taken earlier this
16 year, correct?

17 A It was taken in March, yes.

18 Q Okay. And after March, you never went and asked to see
19 what the source code was for that iChat service that uses a
20 Secure Socket Layer connection to move the source code from
21 your team to the server team, did you?

22 A No, I didn't.

23 Q And, sir, this or hand delivery or shared delivery, you
24 didn't refer to either of those methods of moving the source
25 code from your team to the server team at your deposition,

1 did you?

2 A I didn't. I described the way that I was doing it
3 currently. But as you can see, this application didn't
4 exist in 2003, so, obviously, there were other ways of doing
5 it in the past.

6 Q Sir, you didn't mention hand delivery in your
7 deposition when we asked you how that source code got
8 delivered to the server team, did you?

9 A No.

10 Q You didn't remember -- you didn't mention the shared
11 directory, did you?

12 A No.

13 Q You were telling the truth at your deposition, though,
14 right?

15 A Yes.

16 Q And you wanted to get the whole truth out, right?

17 A Yes.

18 Q And a complete answer to every question that was asked,
19 that was your goal, correct?

20 A You didn't ask me how I was doing this in 2002. Had
21 you done so, I would have told you the other ways it was
22 done.

23 Q Sir, was it your goal to give a complete answer to our
24 questions when you were answering those questions under oath
25 at the deposition?

1 A It was my goal to give the best answer that I could at
2 the time, yes.

3 Q And did that include a complete answer, sir?

4 A Wherever possible, yes.

5 Q Okay. You had a chance after your deposition to review
6 it, didn't you?

7 A To review what?

8 Q The transcript, the written questions and answers of
9 your deposition. You had a chance to review that after your
10 deposition, right?

11 A Yes.

12 Q And you did review it, didn't you?

13 A Yes.

14 Q You had 30 days in which to make that review, right?

15 A I don't recall how long I had.

16 Q But you did. You read it carefully, right?

17 A Yes, I did.

18 Q And you noted certain errors, typos, corrections, and
19 you were able to change or correct or add to anything that
20 you thought was missing from your answers during that
21 30 days, didn't you?

22 A I wasn't aware that I was able to add to it anything
23 that was missing. I thought I was correcting the accuracy
24 of the court reporter's transcript.

25 Q You had an opportunity to -- you didn't think, sir,

1 that if you thought that one of your answers was less than
2 complete, you had an obligation to supplement that answer
3 when you were reviewing your transcript?

4 A I was not aware of that, no. I thought I was checking
5 the transcript for accuracy of what I said.

6 Q So you didn't look to see whether your transcript and
7 your answers -- or even if you had decided when you were
8 reviewing your transcript that you left something out of an
9 answer? You didn't try to put it in at that point?

10 A I wasn't aware that I'd left anything out.

11 Q So, sir, you didn't try to put it in when you -- if you
12 thought you left anything out of an answer, you did not try
13 to put that into the testimony when you had a chance to
14 correct your -- review and correct your testimony, correct?

15 A I don't believe there's anything wrong with what I
16 said.

17 Q My question, sir, was: Did you --

18 MR. THOMAS: Your Honor, may I get an answer to my
19 answer, please?

20 THE COURT: Well, I think you have, Mr. Thomas.
21 You asked him if he tried to do that, and he said he didn't
22 know of anything wrong to correct. We've been around this
23 about three times. If you'd like to ask it again, but I
24 don't find that the answer is nonresponsive. I'd suggest we
25 move on.

1 Q (By Mr. Thomas) Now, sir, on this slide when you get
2 the information, the software from Mr. Fasoli and his team,
3 your team actually changes that software -- changes the
4 information that comes on that disk, right?

5 A We don't change it. We supplement it with code that my
6 team writes.

7 Q Okay. So what leaves your team is not the same thing
8 as what arrived at your team from Mr. Fasoli, right?

9 A No.

10 Q Okay. And what arrives at the -- what the server team
11 puts up on the Apple DRM servers, is that exactly the same
12 thing that arrived from your team?

13 A It's exactly the same thing that was delivered by my
14 team, if that's what you meant to say.

15 Q Right. And it was delivered over this Secure Socket
16 Layer connection, correct?

17 A Correct. And usually, yes.

18 Q Okay. And that Secure Socket Layer connection uses a
19 digital certificate and/or digital signature to establish
20 the encryption within the channel, correct?

21 A Yes.

22 Q And so if you didn't have that certificate to establish
23 that secure connection, you wouldn't have been able to
24 transmit that software from your Ward team to the server
25 team, correct?

1 A There are a number of different ways that I could have
2 done it without an SSL connection, so that's not correct,
3 no.

4 Q But in each instance where you did do it, there was a
5 digital certificate that was used to establish that SSL
6 connection before the source code was moved from your team
7 to the server team, correct?

8 A Can you clarify what you meant by "did do it"? Are you
9 talking about when I transferred the software to them, or
10 are you talking about --

11 Q Each time -- I'll ask the question again.

12 THE COURT: Yeah. Mr. Ward, if you don't
13 understand the question, just say you don't understand.

14 THE WITNESS: I'm sorry.

15 THE COURT: Rephrase your question, Mr. Thomas.

16 Q (By Mr. Thomas) Each time that you have transmitted
17 source code from your team to the server team using a Secure
18 Socket Layer connection, there was a digital certificate
19 used ahead of that transmission to create the secure tunnel,
20 correct?

21 A Correct.

22 Q And currently, the only way you move the software from
23 your team to the server team is through this iChat service,
24 correct?

25 A I don't think that's the only way. That is the most

1 common way.

2 Q Do you recall -- do you know there's an expert here for
3 Apple? His name is Dr. Prowse.

4 A Yes.

5 Q Okay. You've had some conversations with Dr. Prowse;
6 is that correct?

7 A I believe I may have spoken to him at the hotel over
8 dinner.

9 Q You don't think you spoke to him before you got here
10 for your -- for this trial?

11 A Not that I can recall. He may have been on one of the
12 phone calls that I was party to discussing the trial.

13 MR. THOMAS: If I could have Dr. Prowse's expert
14 report, Paragraph 114 on Page 53.

15 THE COURT: And, Mr. Ward, you're going to need to
16 speak up a little bit, please.

17 THE WITNESS: Okay. Sorry, Your Honor.

18 TECHNICIAN: I'm sorry. What page?

19 MR. THOMAS: Page 53, starting at Line 1, 2, 3, 4,
20 5 -- Line 6.

21 Q (By Mr. Thomas) It says: From my discussions -- this
22 is Dr. Prowse's --

23 MR. THOMAS: If you could go on down to the
24 footnotes as well, please, Mr. Diaz.

25 Q (By Mr. Thomas) Do you see here, sir, where at Footnote

1 304 it says: Discussions with Dr. Kelly and Mr. Ward?

2 Discussions with Dr. Kelly and Mr. Ward?

3 MR. THOMAS: And if we could go up, and then,
4 please, if you could take a look at -- you've got to go --
5 Mr. Diaz, I've got to get to Footnote 304 and 305, please.

6 There you go. No. I've got to show it in the
7 paragraph above.

8 There you go. Stop.

9 Q (By Mr. Thomas) The sentence here, it says: I
10 understand from Mr. Ward that Apple could transmit new
11 FairPlay software to the iTunes servers without the use of
12 SSL in multiple ways.

13 Do you recall telling Mr. Ward that -- I'm sorry --
14 Mr. Prowse that?

15 A I don't recall exactly when I said that, but I have
16 said that to a number of different people, yes.

17 Q And you -- he also said -- Mr. Prowse said: First, I
18 understand that Apple could encrypt the new FairPlay
19 software and use an unsecure connection, such as FTP, to
20 transmit the new FairPlay software to the iTunes server.

21 And then he's got Footnote 305, which we also saw, with
22 citations to a conversation with you. Do you recall telling
23 Mr. Prowse what he reflects here in this sentence that we've
24 highlighted?

25 A I recall saying that it can be copied a number of

1 different ways. Whether or not it needs to be encrypted is
2 beside the point, I think. I don't recall saying that it
3 would have to be encrypted to do that.

4 Q And Mr. Prowse reflects here that you said it could be
5 done these other ways. You didn't tell him it was being
6 done any other way than through that iChat SSL connection,
7 did you?

8 A I don't recall.

9 Q Certainly, Mr. Prowse didn't express, from his
10 discussions with you, that you told him it was being done
11 any other way than through the SSL connections, correct?

12 A I don't really know.

13 Q Now, sir, before you were deposed in this case, you met
14 with some of your co-workers, correct?

15 A I meet with my co-workers every day.

16 Q I mean, in preparation for your deposition, sir.

17 A Yes.

18 Q And you met with Mr. Farrugia, for example, and
19 Mr. Gentil and Mr. Fasoli?

20 A Yes.

21 Q And you all got in the room to prepare for testifying
22 at your deposition, and the Apple lawyers were there with
23 you to help the preparation, correct?

24 A I would say we got in a room to review the patents. I
25 wouldn't necessarily say it was preparation for a

1 deposition.

2 MR. THOMAS: If I could have Mr. Ward's deposition
3 at Page 89, question at Lines 4 and 5.

4 Q (By Mr. Thomas) Do you recall being asked this
5 question, sir, at your deposition?

6 Question: What did you do to prepare for your
7 deposition today?

8 And do you recall being -- giving the -- the following
9 answer starting at Line 9 and going down to Line 21?

10 Answer: I met with Apple counsel and outside counsel
11 on Monday.

12 Question: The two counsel that are here today?

13 Answer: Yes.

14 Question: Anybody else?

15 Answer: There were other Apple employees there who
16 were also preparing for the depositions.

17 Question: Who else?

18 Answer: Mr. Fasoli, Mr. Makower, Mr. Gentil, and
19 Mr. Farrugia.

20 Question: Okay. How long did you meet for?

21 Answer: All day.

22 Does that refresh your recollection, sir, that you met
23 with the lawyers and your co-workers who were also
24 testifying in this case in preparation for your deposition?

25 A Yes.

1 Q Now, when you get this software from Mr. Fasoli --

2 MR. THOMAS: If I could have that slide back up
3 that -- there you go.

4 Q (By Mr. Thomas) When you get this software from
5 Mr. Fasoli, you install it on a source repository; isn't
6 that true?

7 A Not immediately, no.

8 MR. THOMAS: If I could have Mr. Ward's
9 deposition, please, at Page 56, Line 11 to 25.

10 Q (By Mr. Thomas) When you answered --

11 MR. THOMAS: If you could go up a little higher,
12 please, sir.

13 Q (By Mr. Thomas) Question at Line 3: What does the --

14 MR. THOMAS: Go up to Line 3.

15 Q Question: What do -- do you still receive the updates
16 to the DRM libraries in a sealed bag?

17 Answer: My team does, yes.

18 Question: What does your team do with the sealed bag
19 when it receives it?

20 Answer: Open it -- opens it.

21 Question: What do you do with the DVD after they open
22 the sealed bag?

23 Answer: They read the contents of the DVD and --

24 Question: On a computer --

25 Answer: Yes.

1 Question: -- presumably?

2 Answer: Yes.

3 Question: Okay.

4 Answer: And then they check it into our source
5 repository.

6 Question: And where is that -- where is your source
7 repository maintained?

8 And your answer was: I don't know where it is
9 physically, but it's -- we call it -- it's called the
10 FairPlay repository.

11 Does that refresh your recollection as to your answers
12 there, sir?

13 A Yes.

14 Q And so you gave this testimony after reviewing the
15 patents-in-suit in this case when you met with the lawyers
16 and the other witnesses, right?

17 A Correct.

18 Q And at that point, you said you were installing the
19 FairPlay software that you got from Mr. Fasoli on the
20 FairPlay repository.

21 That was your testimony, right?

22 A Yes.

23 Q And when you had an opportunity to go in and correct
24 any typos or anything else in your testimony, you didn't
25 change that, did you?

1 A I did not.

2 MR. THOMAS: I have no further questions for this
3 witness, Your Honor, and I pass the witness.

4 THE COURT: All right. Redirect, Mr. Pritikin?

5 REDIRECT EXAMINATION

6 BY MR. PRITIKIN:

7 Q Mr. Ward, when you used the term "FairPlay repository,"
8 how were you using the word "repository"?

9 A "Repository" is a word that's used very commonly by
10 people in the software industry, and it has a very general
11 meaning. It's understood to mean somewhere where you store
12 things. It's not the same as the meaning within the context
13 of this trial, which the Court has defined much more
14 narrowly scoped.

15 Q And with respect to your deposition, did you give
16 complete answers to the questions you were asked?

17 A I did, yes.

18 MR. PRITIKIN: I have nothing further, Your Honor,
19 I pass the witness.

20 THE COURT: Additional cross?

21 MR. THOMAS: Very quickly, Your Honor.

22 RECROSS-EXAMINATION

23 BY MR. THOMAS:

24 Q Mr. Ward, how does the software for the FairPlay DRM
25 servers get to North Carolina from your -- your group in

1 California?

2 MR. PRITIKIN: Your Honor, I'm going to object as
3 beyond the scope of the redirect.

4 THE COURT: Overruled. You can answer the
5 question.

6 A It doesn't go directly from my group to North Carolina;
7 it goes from my group to the server team. And they are the
8 ones who copy it from wherever they happen to be located to
9 machines in North Carolina and in Newark in California.

10 Q (By Mr. Thomas) And so where is that server -- I'm
11 sorry. You called it "the group." I didn't -- I didn't
12 catch the name. I apologize.

13 What did you use for that name of the group that you
14 deliver it to? The server group?

15 A Yes.

16 Q And the server group is located in California; is that
17 correct?

18 A I believe they have people in various different
19 locations.

20 Q But this is a group you send it to through the iChat
21 messaging application with an SSL connection, correct?

22 A Correct.

23 Q And how did they move it from wherever they're located
24 to North Carolina and to the DRM servers that are in the
25 California?

1 A They use a program called rsync.

2 Q And what is rsync?

3 A It's a -- it's a UNIX utility program that takes a
4 directory on one machine and synchronizes it with a
5 directory on another machine.

6 Q And where are those rsync computers located?

7 A I'm not sure what you mean by that.

8 Q You said they use a program called rsync. I'm assuming
9 the program is running on a computer; is that correct?

10 A It's running on more than one computer in order to do
11 this, yes.

12 Q And these are the server teams' computers; is that
13 correct?

14 A One of them will be a member of the server teams'
15 computer, yes. And he's synchronizing that with all of the
16 machines in our data centers.

17 Q And he's synchronizing that with machines in North
18 Carolina, correct?

19 A Some of them are in North Carolina, yes.

20 Q And the others are in Newark, California, which is near
21 Palo Alto, which is, I think, near Apple's headquarters,
22 correct?

23 A It's in East Bay, yeah.

24 Q And so obviously that's an electronic transmission of
25 some type, right? They don't walk it across the street in

1 an evidence bag to North Carolina, do they?

2 A No, they don't.

3 Q So this electronic transmission, what -- you said it's
4 this rsync protocol that's used to move the data?

5 A Correct.

6 Q Did you look to see what this protocol entails with
7 respect to that transmission, that last hop to the DRM
8 servers?

9 A I'm not sure what you mean by that.

10 Q Do you know how rsync actually formats and forwards and
11 transmits the software to these DRM FairPlay servers?

12 A I have a general understanding.

13 Q But did you look into that? Did you ask anybody in the
14 server group before you testified here today how that works
15 and how they do it?

16 A rsync is a UNIX command that has been around 30 or
17 more years. I'm not sure what you're getting at. I mean, I
18 didn't need to ask anybody how they do it. I know how they
19 do it.

20 MR. THOMAS: Your Honor, I move to strike that
21 last answer as nonresponsive. If I could just get an answer
22 to my question.

23 THE COURT: I'll sustain the objection.

24 Restate your question.

25 And then, Mr. Ward, answer the question that's

1 asked.

2 Q (By Mr. Thomas) Did you ask anybody on the server team
3 exactly what the protocol was that they were using to
4 transmit this software in a final hop from their machines to
5 the DRM FairPlay servers in North Carolina and in
6 California?

7 A I did ask them to send me the script that they used so
8 that I could read it and understand it, yes.

9 Q Do you know whether or not that's -- when did you ask
10 them for that script?

11 A I don't recall exactly. A number of weeks ago.

12 Q So after your deposition?

13 A Yes.

14 Q Do you know whether or not that script was provided to
15 our source code reviewers when they were reviewing source
16 code in this case?

17 MR. PRITIKIN: Your Honor, same objection based on
18 the MIL.

19 THE COURT: Approach the bench.

20 (Bench conference.)

21 THE COURT: Mr. Thomas, we're not going to get
22 into discovery issues.

23 MR. THOMAS: I'm just asking him if he knows
24 whether or not it was provided as part of their -- any other
25 collection effort, if anybody asked him for it, and if he --

1 if he knows. If he says I don't know, then he doesn't know,
2 Your Honor.

3 THE COURT: Well, "provided it" and then "provided
4 it to our source code reviewers" is a little different. You
5 need to make it a generic question and avoid inferences to
6 the discovery process.

7 MR. THOMAS: Can I ask him, does he know if that
8 script was part of the discovery process in this case? I'm
9 trying to come up with -- I'm happy to ask it generically,
10 Your Honor. I just don't want to get another objection
11 here.

12 MR. PRITIKIN: I think they're making an inference
13 here that somehow they can't prove their case because this
14 wasn't provided, and we're long past that. And the jury
15 shouldn't be basing a decision on the basis of whether -- at
16 this stage.

17 THE COURT: Well, you can address that on
18 redirect. He's asked a lot of things, did you -- you didn't
19 ask for this; you didn't correct this. You can establish on
20 redirect that there wasn't a need to correct it. There
21 wasn't a need to ask for it. You can -- you can rebut that
22 inference if you want to, but you do it on your next pass.

23 Let's don't use the word "discovery." Let's just
24 talk about whether they produced it or not.

25 MR. THOMAS: Okay.

1 THE COURT: Okay. Let's go forward.

2 (Bench conference concluded.)

3 THE COURT: Let's proceed.

4 Q (By Mr. Thomas) Do you know, Mr. Ward, whether this
5 rsync script that you asked for was produced in this case?

6 A I don't know.

7 MR. THOMAS: I have no further questions, Your
8 Honor. I pass the witness.

9 THE COURT: All right.

10 MR. PRITIKIN: I have nothing further, Your Honor.
11 Pass the witness.

12 THE COURT: All right. Then you may step down,
13 Mr. Ward.

14 THE WITNESS: Thank you very much.

15 THE COURT: Is there a request for this witness to
16 be excused?

17 MR. PRITIKIN: Well, I would make the same
18 request, Your Honor.

19 THE COURT: Is there objection from the Plaintiff?

20 MR. THOMAS: We do have him on our rebuttal list,
21 Your Honor.

22 THE COURT: All right. Then we'll keep him
23 around.

24 Mr. Ward, you're not excused.

25 Defendant, call your next witness.

1 MS. SMITH: Your Honor, Apple calls Mr. Eddie
2 Chen. Mr. Chen is a former ContentGuard employee, and we're
3 calling him by video deposition.

4 THE COURT: What's the anticipated length of the
5 witness by deposition?

6 MS. SMITH: I believe it's 20 minutes and
7 39 seconds, Your Honor.

8 THE COURT: All right. You may proceed,
9 Ms. Smith.

10 MS. SMITH: Thank you.

11 (Video clip playing.)

12 QUESTION: Can you please state your name for the
13 record?

14 ANSWER: Eddie Chen.

15 QUESTION: When you started in approximately 1985
16 at Xerox, where did you start?

17 ANSWER: I started with a scanner development
18 group.

19 QUESTION: ContentGuard was formed in
20 approximately April of 2000; is that right?

21 ANSWER: That's correct.

22 QUESTION: Were there any brand names that were
23 associated with these commercial products that ContentGuard
24 was attempting to build?

25 ANSWER: Yeah. It was called RightsEdge.

1 QUESTION: You said that around the time that you
2 became vice president of technology, the end of 2001,
3 ContentGuard no longer was making a significant investment
4 in its commercial products; is that right?

5 ANSWER: That's correct.

6 QUESTION: Why?

7 ANSWER: The cash is burning too fast.

8 QUESTION: Did ContentGuard not have enough
9 customers to -- to keep it running at a profit?

10 ANSWER: That's probably correct.

11 QUESTION: Mr. Chen, are you currently a full-time
12 employee of ContentGuard?

13 ANSWER: No.

14 QUESTION: When did you stop being a full-time
15 employee of ContentGuard?

16 ANSWER: 2013.

17 QUESTION: Approximately what month in 2013?

18 ANSWER: September.

19 QUESTION: Until you left the full-time employment
20 at ContentGuard, were you the vice president of technology
21 at ContentGuard?

22 ANSWER: I think I -- official title was CTO.

23 QUESTION: At some point, you went from VP of
24 technology to become the acting CEO of ContentGuard?

25 ANSWER: Acting co-CEO.

1 QUESTION: Okay. When did that occur?

2 ANSWER: That was after Michael Miron left the
3 company. So there's a period of time after Mike left and
4 before Rob Logan came onboard. So there were two of us, you
5 know. I was one, and there's another person.

6 QUESTION: And eventually, you left ContentGuard
7 as a full-time employee in September of 2013 -- bless you --
8 is that correct?

9 ANSWER: That's correct.

10 QUESTION: And why did you leave ContentGuard in
11 September of 2013?

12 ANSWER: The company has been relocated to Texas.
13 You know, I had families and parents to take care of. So I
14 didn't accept the initial offer, you know, to relocate.

15 QUESTION: Do you continue to make any income from
16 ContentGuard?

17 ANSWER: Yes, I do.

18 QUESTION: And how is it that you come to have
19 income from ContentGuard even though you're not a full-time
20 employee of ContentGuard?

21 ANSWER: I became a consultant for ContentGuard.

22 QUESTION: Sir, do you see that Exhibit A-386 is a
23 consulting agreement dated August 16th, 2013, between
24 ContentGuard, Pendrell, and yourself?

25 ANSWER: Yes.

1 QUESTION: Am I correct that this is the agreement
2 that -- that establishes the consulting arrangement between
3 you and ContentGuard?

4 ANSWER: Yes.

5 QUESTION: If I can ask you to look at the
6 second -- the next page, Attachment 2 to this consulting
7 agreement, do you see there's a fee schedule there?

8 ANSWER: Yes.

9 QUESTION: And do you see Subpart A sets forth the
10 fee schedule as, quote, so long as consultant's time
11 commitment for services does not exceed the time commitment
12 contemplated by the statement of work, consultant shall be
13 paid \$12,333.33 per month for the services, end quote.

14 Do you see that?

15 ANSWER: Yes, I do.

16 QUESTION: Since August 16th of 2013, have you, in
17 fact, been paid \$12,333.33 per month for your work for
18 ContentGuard?

19 ANSWER: Yes.

20 QUESTION: Has there been any month when you have
21 not received at least that much money from ContentGuard?

22 ANSWER: No.

23 QUESTION: I'm curious, sir. What -- as one of
24 the inventors, what do you believe that your '053 patent
25 adds to Mr. Stefik, Mr. Pirolli's, and Mr. Merkle's

1 disclosure in their '012 patent?

2 ANSWER: It's a heavy question. I couldn't give
3 you a credible answer without, you know, studying --
4 restudying these patents.

5 QUESTION: Sitting here today, do you have any
6 understanding or belief as to what it is that you invented
7 that you obtained a U.S. patent for, the '053 patent?

8 ANSWER: Can you repeat the question?

9 QUESTION: Yes.

10 Do you believe you invented something for which
11 you received a U.S. patent in the '053 patent?

12 ANSWER: Yeah, I was one of the inventors.

13 QUESTION: And do you believe you invented
14 something?

15 ANSWER: Of course.

16 QUESTION: What do you think you invented?

17 ANSWER: Yeah, I -- I couldn't recall.

18 QUESTION: You can't recall what you invented for
19 which you got a U.S. patent, anything about it?

20 ANSWER: As a group, right, you know -- you know,
21 what is invented is captured in the claims. What I meant
22 was, you know, I couldn't recall, you know, which specific
23 part of the inventions I contributed. You know, it's --
24 it's been a long time.

25 QUESTION: Now, you were the vice president of

1 technology at ContentGuard at the time this patent
2 application was filed, correct, 2004?

3 ANSWER: Yes.

4 QUESTION: It's possible, in fact, that at that
5 time, you were also an acting co-CEO of the company?

6 ANSWER: It's possible.

7 QUESTION: And you remained either the vice
8 president of technology or the chief technology officer of
9 ContentGuard at all times then until your departure in
10 September of 2013?

11 ANSWER: That's correct.

12 QUESTION: And was it your responsibility to --
13 was it ultimately your responsibility to prosecute patent
14 applications on behalf of the company in conjunction with
15 the attorneys?

16 ANSWER: That's correct.

17 QUESTION: And sitting here today, how many
18 patents are you named as an inventor on, sir?

19 ANSWER: Maybe 20.

20 QUESTION: So of the 20 patents that you are named
21 as an inventor on, do you happen to recall what you invented
22 as part of any of those 20 patents?

23 ANSWER: I couldn't remember.

24 QUESTION: Okay. Well, let me see if I can help
25 out in any way.

1 ANSWER: Okay.

2 QUESTION: Have you ever heard the term
3 "meta-right" before?

4 ANSWER: Yes.

5 QUESTION: What do you understand that term to
6 mean in your patent?

7 ANSWER: I -- they're -- meta-rights, they're --
8 do you -- are you asking me to give an opinion on what it
9 is?

10 QUESTION: Yes. As the inventor of the '053
11 patent, in which that term appears, I'm asking you to tell
12 me what you think that term means.

13 ANSWER: Yeah. There's -- there's the legal
14 definition of the -- of these words, right, in the -- in the
15 claim and in the disclosure. I think that the proper answer
16 is -- is studying these patents.

17 QUESTION: The patent -- I'm sure you're familiar
18 having prosecuted more than 200 patent applications, that a
19 patent can only claim what somebody invented; is that
20 correct?

21 ANSWER: That's my understanding.

22 QUESTION: And you are one of the four named
23 inventors on the '053 patent, correct?

24 ANSWER: That's correct.

25 QUESTION: And you believe you invented something;

1 is that correct?

2 ANSWER: Yes.

3 QUESTION: Otherwise, you wouldn't have filed for
4 a U.S. patent; is that right?

5 ANSWER: That's correct.

6 QUESTION: And sitting here today, you can't
7 remember exactly what it is you believe you invented?

8 ANSWER: That's correct.

9 QUESTION: But we know that the term "meta-right"
10 appears in your patent, correct?

11 ANSWER: That's correct.

12 QUESTION: And so I'm asking you, as one of the
13 inventors on the '053 patent, if you have any understanding,
14 sitting here today, as to what the term "meta-right" means.

15 ANSWER: Yeah. I -- I had an understanding when
16 we were working on it, but, you know, right now, there's so
17 many patents, I -- I have worked at there, I couldn't recall
18 specifically.

19 QUESTION: Can you recall anything about it?

20 ANSWER: I remember meta-rights. You know, it's
21 a -- it's -- it's one of the terms, you know, we used in
22 multiple patent applications.

23 QUESTION: Sir, do you see that Exhibit A-168 is
24 entitled ContentGuard, an Intellectual Property Company,
25 Annual Review and Strategy Session, December 19th, 2005?

1 ANSWER: Yes.

2 QUESTION: Sir, did you ever participate in annual
3 review and strategy sessions held at ContentGuard?

4 ANSWER: Yes.

5 QUESTION: See, there's a slide entitled Managing
6 Patent Portfolio to Meet Changing Demands, 1 of 2.

7 Do you see that?

8 ANSWER: Yes.

9 QUESTION: Have you ever seen this slide before?

10 ANSWER: I must have, yes.

11 QUESTION: You see the first bullet says: 1994 to
12 2000, managed by Xerox. Filed in U.S., UK, DE, FR, and JP.
13 No specific business focus. Granted patents are narrow.

14 Do you see that?

15 ANSWER: Yes.

16 QUESTION: And then the second bullet says: 2000
17 to 2002. Broaden the Stefik claims.

18 Do you see that?

19 ANSWER: Yes.

20 QUESTION: To your recollection, was it a goal of
21 ContentGuard from 2000 to 2002 to broaden the Stefik claims?

22 ANSWER: Yeah. There -- there was one of the
23 objectives is to get the claims we deserve.

24 QUESTION: And do you recall the philosophical
25 change within ContentGuard and with Mr. Kaufman onboard that

1 led to the goal to broaden the Stefik claims?

2 ANSWER: Well, we need -- need more patents,
3 right?

4 QUESTION: For what reason?

5 ANSWER: In those days, you know, we're interested
6 in participation -- participation in patent pools.

7 So, you know, one way, you know, the patent pool
8 works is that if you have more essential patents, you know,
9 the -- the incoming proceed are distributed to different
10 patentholders that they based on the number of essential
11 patents.

12 So there was at least, you know, one of the
13 motivations to acquire more patents.

14 QUESTION: And so I want to pick up on
15 Exhibit A-386, which is your consulting agreement with
16 ContentGuard dated August 16th, 2013.

17 Do you have that, sir?

18 ANSWER: Yes, I do.

19 QUESTION: Mr. Chen, that -- with respect to the
20 first year, you worked approximately 40 hours; is that
21 right?

22 ANSWER: Yeah. Approximately, yeah.

23 QUESTION: And -- and you did testify earlier that
24 you were paid each month \$12,333.33, correct, sir?

25 ANSWER: That's correct.

1 QUESTION: You're familiar, sir, in the United
2 States that a conventional workweek is approximately
3 40 hours, right, sir?

4 ANSWER: Yes.

5 QUESTION: Why was ContentGuard paying you over
6 \$244,000 (sic) a year for approximately 40 hours of work?

7 ANSWER: I had an employment agreement. So this
8 was replacing the previous employment agreement. So the
9 amount wasn't actually calculated based on the hourly rate
10 because this is displacing and -- the previous employment
11 agreement, which has a number of things got replaced.

12 QUESTION: Does it strike you as odd that
13 ContentGuard was paying you \$144,000 or more for 40 hours a
14 work a year?

15 ANSWER: Not at all. Actually, the other way
16 around.

17 QUESTION: The other way around, in fact --

18 ANSWER: In consideration of the previous
19 employment agreement.

20 QUESTION: Were you making more money when you
21 were working full time at ContentGuard?

22 ANSWER: Yes, in the total compensation, and there
23 were terms associated with the termination of employment.

24 QUESTION: In the course of any of your licensing
25 activities with -- on behalf of ContentGuard, did any of the

1 licensees say to you or, to your knowledge, anyone at
2 ContentGuard: We don't know how to do DRM? Can -- can you
3 have Mr. Stefik come and teach us about DRM?

4 ANSWER: No, no.

5 QUESTION: Did you ever tell any of the licensees
6 that, in fact, you considered Mr. Stefik to be the father of
7 DRM and he could come on behalf of ContentGuard and teach
8 these licensees about DRM?

9 ANSWER: We did promote Mark as the father of DRM
10 in certain instance.

11 QUESTION: Did any of the licensees ever ask to
12 meet with Mr. Stefik so they could learn about DRM?

13 ANSWER: Not based on my recollection.

14 QUESTION: To your recollection, sir, was
15 Mr. Stefik any -- ever involved at all on behalf of
16 ContentGuard in the transfer of any technology or knowhow
17 with respect to DRM with any of ContentGuard's licensees?

18 ANSWER: No.

19 QUESTION: Were you involved in Pendrell's
20 acquisition of 90.1 percent of ContentGuard shares in
21 October/November 2011?

22 ANSWER: Involved, yes.

23 QUESTION: How were you involved, sir?

24 ANSWER: Attended multiple meetings presenting the
25 company in the best form we can and have individual meetings

1 with the leaders of Pendrell.

2 QUESTION: And when you say presenting the best
3 form of the company you can, you -- you were trying to
4 present ContentGuard in a way to maximize the selling price,
5 correct, sir?

6 ANSWER: Selling price is one of the things,
7 but -- but, you know, in -- in these transactions, I think
8 they also put a lot of emphasis on the people wanted to make
9 sure, you know, we know what we're doing.

10 QUESTION: And one of the things you were
11 presenting with respect to ContentGuard was its patent
12 portfolio, correct, sir?

13 ANSWER: Yes.

14 QUESTION: And the strength of that patent
15 portfolio, right?

16 ANSWER: Yes.

17 QUESTION: And in making that presentation to a
18 potential buyer like Pendrell, you were seeking to present
19 the best case you could for ContentGuard's patent portfolio
20 and the strength of that portfolio, correct?

21 ANSWER: Yes.

22 QUESTION: Then you agree, sir, that the --
23 Pendrell was a sophisticated buyer, correct?

24 ANSWER: Yes.

25 QUESTION: You certainly agree that Microsoft was

1 a sophisticated seller in that transaction, correct, sir?

2 ANSWER: Yeah, I think so.

3 QUESTION: And you agree, sir, that the
4 transaction that took place was an arm's-length transaction
5 where both sides were trying to get a fair price, right?

6 ANSWER: I would assume that's the case.

7 QUESTION: Please turn to Page 21.

8 Here is a slide entitled "Licensing Segments
9 Priorities," and the first bullet point is "Initial target
10 segments."

11 Do you see that?

12 ANSWER: Yes.

13 QUESTION: And the first one listed -- listed
14 under there is "Apple," and under "Apple," it says "Premier
15 Music Solution."

16 Do you see that?

17 ANSWER: Yes.

18 QUESTION: Was targeting industry standards a new
19 aspect of ContentGuard's patent portfolio mining in 2008?

20 ANSWER: It wasn't new in 2008.

21 QUESTION: Okay. So ContentGuard had been
22 targeting industry standards before?

23 ANSWER: Yes.

24 QUESTION: When did it become a patent portfolio
25 mining priority to target industry standards at

1 ContentGuard?

2 ANSWER: It was pretty early. I don't know the
3 specific years, but it probably start as early as the -- the
4 patent pool years. So that would be 2003.

5 QUESTION: Farther down in the email, it says:
6 Stefik is now a consultant for us. We may further promote
7 him as the "Father of DRM." "Father of DRM" is in quotation
8 marks.

9 Do you see that?

10 ANSWER: Yes.

11 QUESTION: And so what were your plans with regard
12 to promoting Stefik as the Father of DRM?

13 ANSWER: You know, we're -- we're trying to -- to
14 basically have more channels for -- for Mark's name to be
15 known and also his contributions -- early contributions to
16 the DRM technologies, potentially using attending or
17 speaking in conferences, have papers or journalists write
18 about him as the promotion vehicle.

19 (End of video clip.)

20 THE COURT: Does that complete this witness?

21 MS. SMITH: Yes, Your Honor.

22 THE COURT: Do you have another witness by
23 deposition to call?

24 MS. SMITH: Yes, Your Honor.

25 Apple calls Mr. Thanh Ta. Mr. Ta is a former

1 ContentGuard employee, and that run time is 5 minutes and
2 22 seconds, Your Honor.

3 THE COURT: All right. Proceed with that witness
4 by deposition.

5 MS. SMITH: Thank you.

6 (Video clip playing.)

7 QUESTION: Good morning, Mr. Ta.

8 So it's true, then, from January of 2000 to
9 September of 2013, you were a senior member of the research
10 staff at ContentGuard?

11 ANSWER: Yes.

12 QUESTION: It states that you were the member -- a
13 member of the research staff of Xerox from September 1994 to
14 December 1999, correct?

15 ANSWER: Yes, correct.

16 QUESTION: And you state, quote, as a research
17 staff, I was responsible for the collaboration with Xerox
18 PARC, P-A-R-C, the research arm of Xerox, to prototype the
19 initial ideas on DRM and further research in order to expand
20 Xerox's early concept of DRM with enhanced functionality to
21 meet projected needs for the cooperation -- for the
22 corporation, and based on feedback from early customer
23 engagement, end quote.

24 Do you see that?

25 ANSWER: Yes.

1 QUESTION: What were the initial ideas on DRM that
2 you're referring to?

3 ANSWER: Well, Stefik have certain research paper
4 and patent application, and we took those idea and prototype
5 it and promote the DRM within Xerox.

6 QUESTION: Okay. So in September 1994 when you
7 began at Xerox, how did you become aware of Mark Stefik's
8 research?

9 ANSWER: I -- I was hired for this particular
10 project.

11 QUESTION: But you were hired for the purpose of
12 working with Mark Stefik?

13 ANSWER: Yeah, to -- yeah. At that point in time,
14 I was engineer, and they want me to prototype the idea.

15 QUESTION: They wanted you to prototype the idea?

16 ANSWER: Right.

17 QUESTION: So how did you -- what did you do in
18 order to familiarize yourself with Mark Stefik's idea?

19 ANSWER: Like everything else, you always starting
20 with first learning it.

21 QUESTION: Did you look at any patent
22 applications?

23 ANSWER: I don't remember. I may read -- read
24 some -- some research paper, not patent application.

25 QUESTION: Okay. But --

1 ANSWER: It's -- if I remember correctly.

2 QUESTION: So you think you looked at a paper, but
3 maybe not a patent application?

4 ANSWER: I think so.

5 QUESTION: And was that paper "Letting Loose the
6 Light," written by Mark Stefik?

7 ANSWER: That's one of them.

8 QUESTION: Did reviewing "Letting Loose the Light"
9 and other materials allow you to understand what Mark
10 Stefik's idea was?

11 ANSWER: I don't remember specific. There's a lot
12 of thing you have to learn. You have to do some research.
13 But right now, I mean, so long.

14 QUESTION: Sir, do you see that Exhibit G-45 is
15 United States Patent No. 6,519,700?

16 ANSWER: Yes.

17 QUESTION: And its title is Self-Protecting
18 Documents.

19 Do you see that?

20 ANSWER: Yes.

21 QUESTION: Am I correct that that is -- that you
22 are one of the named inventors?

23 ANSWER: You are correct.

24 QUESTION: It's not -- and this particular patent
25 was filed on October 23rd, 1998.

1 Do you see that?

2 ANSWER: Yes.

3 QUESTION: Column 1, approximately Line 65, do you
4 see it says, quote, two basic schemes have been employed to
5 attempt to solve the document protection problem: Secure
6 containers and trusted systems, end quote.

7 Do you see that?

8 ANSWER: Yes.

9 QUESTION: Do you recall that in 1998, that these
10 two approaches existed to attempt to solve the document
11 protection problem?

12 ANSWER: Yes.

13 QUESTION: Do you see on the top of Column 2, it
14 says, quote, a secure container or simply an encrypted
15 document offers a way to keep document contents encrypted
16 until a set of authorization conditions are met and some
17 copyright terms are honored, e.g., payment for use, end
18 quote?

19 Do you see that?

20 ANSWER: Yes.

21 QUESTION: Was the secure container approach the
22 approach that was suggested by Mark Stéfik?

23 ANSWER: I think this two is totally different.

24 QUESTION: And do you have an understanding of
25 what -- what sort of consulting services you are to be

1 providing to ContentGuard?

2 ANSWER: I do provide my service 40 hour -- my
3 service to ContentGuard probably about 40 hour -- my --
4 40 hour per year.

5 QUESTION: How many hours?

6 ANSWER: 40 hours.

7 QUESTION: 40 hours per year?

8 So that's the amount of time that you're supposed
9 to devote to ContentGuard?

10 ANSWER: Right.

11 QUESTION: Am I correct that \$8,125 is an amount
12 that you had agreed to be paid to you as part of your
13 consulting agreement?

14 ANSWER: Yes.

15 QUESTION: Is that paid on a monthly basis, as you
16 understand it, or on a quarterly basis?

17 ANSWER: Quarterly basis.

18 QUESTION: Quarterly basis.

19 So for the year, you received four different
20 payments of \$8,125, correct?

21 ANSWER: Yes.

22 QUESTION: And in return for that, you did
23 approximately 20 to 30 hours worth of consulting work in the
24 year September 2013 to September 2014?

25 ANSWER: Yes.

1 (End of video clip.)

2 THE COURT: That completes this witness?

3 MS. SMITH: Yes, Your Honor.

4 THE COURT: Do you have another witness to present
5 by video deposition?

6 MS. SMITH: I do, Your Honor. Mr. William
7 Rosenblatt. Mr. Rosenblatt is the president of Giant Steps
8 Media Technology Strategies, also by video, Your Honor, and
9 the run time is 55 seconds.

10 THE COURT: All right. Proceed.

11 MS. SMITH: Thank you.

12 (Video clip playing.)

13 QUESTION: Could you please state your full name
14 and address for the record?

15 ANSWER: Yes. My name is William Rosenblatt.

16 QUESTION: Okay. Do you recall when the term
17 "digital rights management" or DRM first started being used?

18 ANSWER: Good question. I'm under oath, and I'm
19 obligated to give you the best recollection that I have, and
20 so I will try to do so.

21 I would say that the term probably arose in maybe
22 the mid-1990s, around '95, and I would -- I'm pretty sure
23 that the first -- the -- the first source of that term was
24 probably Bob Weber at InterTrust.

25 QUESTION: Are you currently a consultant for

1 ContentGuard?

2 ANSWER: In the context of this litigation, yes.

3 (End of video clip.)

4 THE COURT: That completes this witness?

5 MS. SMITH: Yes, Your Honor.

6 THE COURT: And do I understand there's a fourth
7 video witness you wish to present?

8 MS. SMITH: Yes, Your Honor. And that's our final
9 video witness. Mr. Michael Miron. He is the former CEO of
10 ContentGuard, and his run time is 4 minutes and 8 seconds,
11 Your Honor.

12 THE COURT: Proceed.

13 MS. SMITH: Thank you.

14 (Video clip playing.)

15 QUESTION: First, could you please state your full
16 name?

17 ANSWER: Michael Miron.

18 QUESTION: I'd like to turn your attention,
19 Mr. Miron, to your time at ContentGuard. When were you an
20 employee at ContentGuard?

21 ANSWER: Well, I was a founding employee. That
22 would have been the spring of 2000, if memory serves. I
23 don't have the precise dates. But spring of 2000 until my
24 departure just about -- I think it would have been right
25 around April of 2005. Since I don't have the timeline in

1 front of me, I could be off a little bit, but approximately
2 those dates.

3 QUESTION: And were you the CEO of ContentGuard --

4 ANSWER: Yes, I was.

5 QUESTION: -- during that time frame?

6 ANSWER: Yes, I was.

7 QUESTION: And when you became the CEO of
8 ContentGuard in 2000, ContentGuard had certain patents
9 relating to DRM, correct?

10 ANSWER: Yes.

11 QUESTION: And ContentGuard, at this time of its
12 formation, it was not a developer or distributor of any
13 content, correct?

14 ANSWER: Correct.

15 QUESTION: Is it your understanding, sir, that
16 encryption was a technology or at least a way of
17 distributing content that existed prior to the development
18 of DRM?

19 ANSWER: Encryption did exist apart from DRM,
20 that's correct.

21 QUESTION: If you look in this press release --
22 first of all, did you review and approve this press release
23 as the CEO of ContentGuard at this time?

24 ANSWER: Yes.

25 QUESTION: Mr. Miron, if you could turn your

1 attention to the last paragraph of this press release, it
2 discusses ContentGuard's extensible rights markup language,
3 XrML.

4 What was XrML?

5 ANSWER: That was our solution to the question of
6 interoperability. It was an XML-based language to express
7 rights and permissions that would go into that rights
8 expression and be able to be interpreted by any application
9 because we were promoting it as an open standard.

10 QUESTION: Was ContentGuard successful in its
11 promotion of XrML as a standard in the industry?

12 ANSWER: Largely not.

13 QUESTION: And do you recall having an interview
14 with Investor's Business Daily?

15 ANSWER: Yes. I recall it was some weeks before
16 this time. Because by this date line, I had already been
17 gone for a month.

18 QUESTION: And I just want to talk about two
19 things on the second page. If you flip there.

20 So about the middle of this page, it says: Prior
21 to iTunes, you had MusicNet and PressPlay, now Napster.

22 And then skipping down further it says: Miron,
23 colon, and I believe that's you stating that: Until Apple
24 released iTunes, the prevailing view was that you can't make
25 money doing online distribution.

1 Do you see that?

2 ANSWER: Yes.

3 QUESTION: And how did iTunes change online
4 distribution?

5 ANSWER: At the time my view was that per our
6 earlier conversation, people were having difficulty getting
7 the balancing act right.

8 Protected content can be intrusive. When it's
9 intrusive, consumers don't use it. I think the general
10 reaction and the marketplace adoption indicated that iTunes
11 really did get that balance right, at least at launch;
12 hence, consumers loved the convenience of digital content.

13 And the design folks at Apple, who were pretty
14 good at this stuff, figured out a way to make that not
15 intrusive. And I think that was the point of this, if I
16 remember.

17 And I remember being impressed with iTunes, too,
18 that somebody finally got the balance right. I knew it
19 would happen, it was hard to know who, or what the
20 circumstances were.

21 But the convenience factor would -- someone would
22 figure out how to take both the concerns about proper usage
23 and the user experience, put them together in the right form
24 and then you'd see something take off.

25 (End of video clip.)

1 THE COURT: Does that complete this witness,
2 Ms. Smith?

3 MS. SMITH: Yes, Your Honor.

4 THE COURT: All right. My understanding is your
5 next witness is Dr. Kelly; is that correct?

6 MR. DAVE ANDERSON: Yes, Your Honor.

7 THE COURT: All right. Well, that, obviously,
8 will take a considerable amount of time. And it's right at
9 5:00 o'clock today. I don't see any advantage in starting
10 that and not being able to get finished.

11 So, ladies and gentlemen, we're going to call it a
12 day. I'm going to excuse you in just a minute. I'll ask
13 you to leave your juror notebooks in the jury room on the
14 table.

15 I remind you not to discuss the case with anyone,
16 including yourselves, and to follow my other instructions.
17 I'd like to have you back tomorrow morning for our usual
18 start time around 8:30.

19 Travel safely. And with that, you're excused for
20 the evening.

21 COURT SECURITY OFFICER: All rise for the jury.

22 (Jury out.)

23 THE COURT: All right. Counsel, is there anything
24 before we recess for the day?

25 Anything from the Plaintiff, Mr. Baxter?

1 MR. BAXTER: No, Your Honor.

2 THE COURT: Anything from the Defendant,
3 Mr. Pritikin?

4 MR. PRITIKIN: No, Your Honor.

5 THE COURT: All right. I'll see you in the
6 morning. We stand in recess.

7 (Court adjourned.)

8

9 *****

10

11 CERTIFICATION

12

13 I HEREBY CERTIFY that the foregoing is a correct
14 transcript from the stenographic notes of the proceedings in
15 the above-entitled matter to the best of my ability.

16

17

18	<u>/S/Shelly Holmes</u>	<u>11/17/15</u>
19	SHELLY HOLMES, CSR, TCRR	Date
20	Official Court Reporter	
	State of Texas No. 7804	
	Expiration Date: 12/31/16	

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